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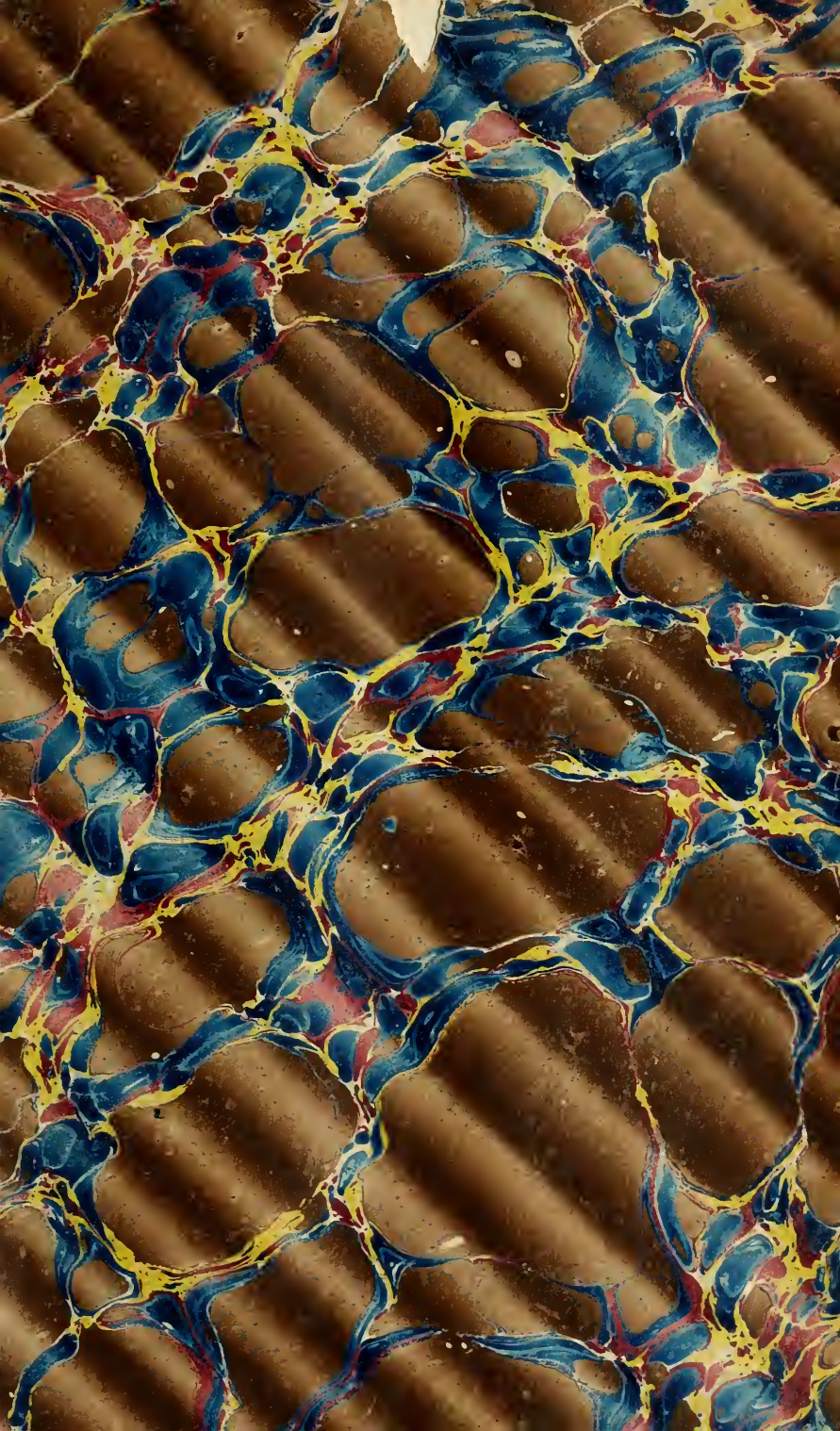
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THE JOURNAL
OF
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AND
MENTAL PATHOLOGY.

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ART. I.—CONSTANCE KENT AND THE ROAD MURDER.

BY JOHN PAGET, BARRISTER-AT-LAW.

THE public interest in the questions connected with the Road Murder, and the confession of Constance Kent, has been revived by the remarks of Dr. Bucknill in his Lumleian Lectures, and by the observations of Dr. Winn in the pages of this Journal.

Questions which arise out of the consideration of confessions of guilt are equally interesting to the jurist as to the psychologist, and forty years' experience at the Bar, fifteen of which have been spent in discharging the duties of a Police Magistrate, may, I trust, protect me from the charge of presumption, when I say that it appears to me that important considerations have escaped the notice of both these very learned and distinguished gentlemen.

So many years have elapsed since the occurrence of the Road Murder, that it is necessary to recall the material facts of the case, so far as they relate to Constance Kent, before considering what may have been her share in the transaction, or what weight ought to be attached to her confession. I may as well say in the outset that I have no intention to suggest criminality in any one, that I have no pet theory to maintain, and that unless the confession of Constance Kent can be relied upon to solve the mystery, I believe the case to be still involved in the deepest obscurity. How far that confession is to be relied on is the question which I propose to consider, and for this purpose a recapitulation of the facts of the case is absolutely necessary.

In the month of June 1860, a gentleman of the name of Kent resided at Road House, near Frome. He was a sub-inspector of factories in the district. His family consisted, in

addition to himself and his wife, of one son, a boy of about 15 years of age, and three daughters, Mary Ann, aged 29, Elizabeth 27, and Constance 16: these were children of a former marriage. By his second wife he had three children—a little girl about 5 years old, Saville, a boy 3 years and 8 months old, and another girl still younger. A nurse of the name of Elizabeth Gough, a cook, and a housemaid, completed the establishment, and on the night of Friday, the 29th of June 1860, all the inmates were at home.

On that night Mr. Kent left the drawing-room window and shutters closed and fastened when he went to bed about eleven o'clock, and on leaving the room he locked and bolted the door.

The nurse Gough slept in a room on the first floor. On the opposite side of the same room Saville Kent slept in a crib, and in another crib, adjoining the bed of the nurse, the little girl, his younger sister, slept. The elder girl was in her mother's room on the opposite side of the passage. About five o'clock the nurse woke. She stated that looking across to the little boy's crib she saw that he was not there, but did not feel any alarm, as she supposed that his mother had fetched him during the night. It was not until some hours afterwards, that on going to her mistress's room she found that he was not there. It should be mentioned here that on the housemaid going down stairs to open the windows, she found the shutters of the drawing-room window unfastened and the window partly raised. On the child being missed a search took place, and on examining the closet in the garden a pool of blood was found on the floor, and the body of the child was discovered in the vault amongst the soil.

The condition of the body was minutely described by Mr. Parsons, a surgeon, the usual medical attendant of the family. His evidence given on the first examination is as follows:—

“On my arrival I saw the body of Francis Saville Kent in the laundry. He had his nightdress on. He was enveloped in a blanket. The blanket and the nightclothes were stained with blood. I observed nothing more than the stains of blood and soil on the clothes. *There was a mark of an incision on the nightdress and flannel on the left side, cutting through the cartilage of the two ribs.* The mouth of the child had a blackened appearance, with the tongue protruded between the teeth. My impression was that the blackened appearance had been produced by forcible pressure on it during life. I examined the interior of the mouth, lips, and cheeks, and found no abrasion such as would lead me to suppose that anything had been forcibly pushed into it. *I then saw a large incision of the throat, extending from one ear to the other, and dividing the whole of the structures down to the spine.* I made a post-mortem examination of the body. *I found all the internal*

organs of the body completely drained of blood. The stomach was in a healthy state, and I saw no reason to suspect the administration of a narcotic or poisonous drug. *I found that the stab in the chest had not penetrated the heart, but had pushed it out of its place, and had penetrated the diaphragm and slightly wounded the outer coat of the stomach on the right of it.* There were also two very slight incisions on the right hand, which appeared to have been made after death. The child appeared to have been dead at least five hours. I think the incision of the throat, and not the stab, was the immediate cause of death. *A long pointed knife, in my opinion, would be the instrument to have caused such wounds.* The deceased was a very heavy child for his age. In my judgment the incision in the chest was made by a pointed knife, but not with the point coming obliquely, but *a dagger-shaped knife like a carving knife.* I came to that conclusion from the way the clothes are cut. *It would have required very great force to inflict such a blow through the nightdress, and to the depth to which it had penetrated.* The ribs of a child are very flexible, and the great amount of force necessary for such a blow would depress the ribs and cause the heart to diverge from its position, and if the clothes had not been cut the heart must have been penetrated.”*

An inquest was held on Monday the 2nd July. The inmates of the house, including Constance Kent, were examined, and a verdict of wilful murder against some person or persons unknown was returned.†

The inquiry still proceeded, conducted by the magistrates with closed doors.‡ Constance Kent was again examined, and a suspicion being entertained against the nurse, Elizabeth Gough, she was apprehended on Tuesday the 10th July and brought before the magistrates.

An application was now made to the Home Secretary for assistance, and Inspector Whicher, of the metropolitan detective police, was despatched to aid in the inquiry, and arrived at Trowbridge on Sunday the 15th July.§ Rewards amounting to £200 were offered, and a promise of pardon to any one but the actual perpetrator of the crime. In the meantime the house had been minutely re-examined, and every inmate, except the little girl of five years old who slept in her mother's room, had been called on to state what they knew in reference to the matter. The inquiry was then adjourned until Friday the 20th July, when Inspector Whicher appeared before the magistrates

* *Annual Register*, June 1860, p. 95.

† *Examiner*, July 7; *Times*, July 11.

‡ *Times*, July 12 and 14; *Examiner*, July 14.

§ *Examiner*, July 21; *Times*, July 16 and 21.

having Constance Kent in custody. Elizabeth Gough, having been discharged from custody, was called and examined as a witness, but stated nothing in any way implicating the prisoner. Inspector Whicher was then examined; he stated that on showing the prisoner a list of her linen, which she admitted to be in her handwriting, and in which *three* nightdresses were mentioned, he had asked her where they were, and she replied, "I have two; the other was lost at the wash the week after the murder."

The prisoner was remanded until Friday the 27th, Whicher stating that he should be able to prove than an "animus" against the child had existed in the mind of the prisoner. As the proceedings on that day contain all that can by any possibility be held to connect Constance Kent with the commission of this crime, apart from her own confession, and are therefore of the utmost importance in testing the value of that confession, they deserve a careful examination. The report will be found at length in the *Times* of the 28th July, and more concisely in the *Examiner* of the 4th August. Elizabeth Gough being recalled, her examination was continued. The only circumstance stated by her, and which was obtained from her on cross-examination, was, that Constance Kent had *uniformly treated the little boy with kindness, and was playing with him on the very day preceding the night of the murder.* The circumstances attending the finding of the body of the child having been proved, Inspector Whicher called two girls, schoolfellows of Constance Kent, with the view of proving, as on the former occasion he had stated that he should be able to do, that an "animus" against her brother existed in the mind of the prisoner. The evidence amounted to nothing more than that Constance had expressed some displeasure at what she considered the partiality of her parents to the children of the second marriage, and proved nothing but the extreme zeal and activity of Inspector Whicher. Mr. Parsons, the surgeon, was then examined, and after describing the condition of the body, he says: "I accompanied Inspector Foley over the house. We went into Constance Kent's room in the course of our search. I examined her drawers, and the nightgown and nightcap which were on the bed, and the whole of the bedclothes. My attention was not attracted to the nightdress; *it had no stains upon it.* It was very clean."

Sarah Cox, the housemaid, was then called. She stated that it was her duty to collect the dirty linen for the wash; that it was usually sent on a Monday; that on the Monday following the murder she found a nightdress of Constance Kent's on the landing where she was in the habit of placing it, and put it into the basket, and had it entered on the list in the

washing book. She then placed the clothes in two baskets, covering one over with a dress belonging to Mrs. Kent, and the other with a tablecloth, so that it would not be easy for anyone to take anything out. She says that, after the clothes were in the basket, Constance Kent came and asked her to look in her slip pocket to see if she had left her purse in it; that she took the slip out, searched it, but found no purse. The witness then says: "She then asked me to go for a glass of water. I did so. *She followed me to the top of the back stairs as I went out of the room. When I returned with the glass of water I found her where I had left her. I do not think I had been gone a minute.* On Saturday the 30th June I took down a clean nightdress of Miss Constance's to be aired. I took another clean nightdress to be aired the following Saturday. The dirty one I put into the basket on the Monday, and the two I aired would make the three. I am clear these were all Miss Constance's nightdresses. *I did not observe any mark or stain on the one I put into the basket on Monday the 2nd July.**

Mrs. Holly, the laundress, and her daughter were then called and swore, with a considerable number of contradictions, that the nightdress in question was not amongst the clothes sent to the wash. If the question of the lost garment had come before a county court judge or a police magistrate (as such questions of lost linen frequently do), and he had been obliged to decide between the evidence of Martha Cox, that it was sent, and that of Mrs. Holly, that it was not—inasmuch as Mrs. Holly admitted that when inquiry was first made by the constables, she told them that the clothes were all right, though, as she said, she knew at the time that the nightdress was missing, and accounted for her falsehood by saying that she expected one to be sent to supply its place—he would probably have considered the evidence of Cox the more trustworthy of the two. The gossip of the two school girls and the mare's nest of the missing nightdress was all that rewarded the zeal of Inspector Whitcher, stimulated by the hope of a reward of £200, and exercised during a period of twelve days, from the 15th to the 27th July. Constance Kent was of course discharged.

A circumstance then occurred which might well draw one's attention to the care which should be exercised before attaching

* Mrs. Dallison, the wife of a policeman, examined subsequently on the 3rd October, says: "On the afternoon of the 30th January I examined the nightdresses of the young ladies, among the rest that of Miss Constance. I found nothing on it to lead to the discovery of the murder. The nightdress of Miss Constance which I examined appeared to have been worn a week. I did not observe any difference in the amount of wear between hers and the other young ladies."

belief to confessions of guilt. A man of the name of Gadd* gave himself up to the police at Wolverton in Northamptonshire, stating that he had committed the murder, having been induced to do so by a promise of money from Mr. Kent, who had himself "handed the child to him out of the drawing-room window, and that he then took it away and killed it."† He was brought before the magistrates at Trowbridge the next day remanded until the 23rd August, and then discharged, his confession being satisfactorily proved to be the result of an insane delusion.

Time passed on without any further light being thrown on these most mysterious circumstances, and in the early part of September application was made to the Government for the appointment of a special commission to examine into the case.‡

This was of course refused; but it was intimated to the magistrates that it would be desirable that further inquiries should be made, and the case was therefore proceeded with under the conduct of a solicitor of the name of Slark, and an examination, strictly private, was made at the house of Mr. Kent during the week ending 22nd September.§ All the inmates were examined. The examination of Constance Kent commenced on Friday the 21st and continued during the whole of Saturday the 22nd.||

On Monday, 1st October, Elizabeth Gough was again placed at the bar charged with the murder. Upon this occasion Mr. Saunders of the Western Circuit appeared for the prosecution. Mr. Ribton, a barrister of long experience in criminal cases, defended the prisoner Elizabeth Gough, and Mr. Edlin, now the assistant judge at the Middlesex Sessions, watched the proceedings for Mr. Kent and his family.¶

Amongst other witnesses Constance Kent was called and examined by Mr. Saunders on behalf of the prosecution. The following is her evidence:—

"I am the daughter of Mr. Kent of Road Hill House. I was at home on the 29th June, and had been so about a fortnight. I had previously been at school at Beckington as a boarder. I saw Saville last when he went to bed on the evening of the 29th June.

"He was a merry, good-tempered boy, fond of romping. I played with him often, and had done so on that day. He appeared to be fond of me, and I was fond of him. I went to bed about half-past ten. I slept on the second floor, in a room between my two sisters and the maid-servants. I remember my sister Elizabeth coming into my room that night after I was

* *Times*, Aug 13; *Examiner*, Aug. 18. † *Times*, Aug. 13, 14, 23; *Examiner*, 25, 1860.

‡ *Times*, Sept. 8. § *Examiner*, Sept. 22. || *Examiner*, Sept. 29.

¶ *Times*, Oct. 2, 3, and 4; *Examiner*, Oct. 6.

in bed. I was nearly asleep then, and remember nothing more. I awoke about half-past six in the morning. I heard nothing during the night. I got up immediately after I awoke, and soon after heard of my brother being missing. On the Friday night I slept in a nightdress. I had slept in the same dress from the Sunday or Monday before. I usually wore the same nightdress a week, changing it on Sunday or Monday. When I got up on Saturday morning I rolled up my nightdress and put it on the bed. My bed is made by the cook and housemaid. My nightdress was before them when they made the bed that morning.

“On Saturday night, the 30th, I slept with my sister Mary Ann. Elizabeth slept with my mamma. Papa stayed up. I slept with Mary Ann for company. I do not know whether anyone slept in my room that night. I wore the same dress on Saturday that I had worn the night before.

“When I got up on Sunday morning I believe I put my nightdress in my own room. On the Sunday night I slept in my own room. I am not certain whether I put on a clean nightdress that night or on Monday. One of my nightdresses goes to the wash every week. I was in the habit of putting out my clean nightdress to be aired. I did so on the Saturday. The dirty linen for the wash was collected on the Monday morning. It was the duty of the housemaid to collect it. One of my nightdresses is missing. I do not know what has become of it.”

Cross-examined by Mr. Ribton:—

“I had been away half a year at school. I was the only girl of the family who slept alone. The prisoner was examined when I was charged with the murder. The nurse told me of a missing blanket before the child was found.

“Q. Are you sure it was not after the child was found?

“A. I am not certain which it was. I heard the prisoner go to my sister’s door and ask whether she had the child with them. I heard her knock, and came to the door to listen.”*

This is word for word the whole of the evidence of Constance Kent, and it must be borne in mind that it was given subject to the cross-examination of an experienced counsel, whose duty to his client required him to extract any answer that might raise a presumption of guilt on the part of the witness, and thus tend to exonerate the prisoner.

The inquiry, which lasted from the 21st September until the 4th October, terminated in the discharge of Elizabeth Gough.

In the month of November a gentleman of the name of Thomas Bush Saunders (who must in no way be confounded with the learned counsel of the name of Saunders who appeared in

* *Times*, Oct. 3.

the case of Eliza Gough) instituted a kind of irregular extra-judicial inquiry, which continued for several days, in the course of which he collected a mass of absurd and irrelevant gossip, the only circumstance which deserves notice being that some dirty linen was found in the boiler hole, which was satisfactorily proved to have no connection with the case. A report of these proceedings will be found in the columns of the *Times* from the 5th to the 15th November.

Now be it observed, that during these protracted proceedings, which lasted from the end of June to the early part of October, a period of fully three months, in which three barristers, two attorneys, a coroner and his jury, Captain Meredith, the Chief Constable of the county, with Inspector Foley and his whole staff of police, and above all Inspector Whicher, the astute detective, specially selected by the authorities of Scotland Yard as best adapted by his experience and ability for the conduct of such an inquiry, besides every inhabitant of the neighbourhood, some stimulated by horror of the deed, and others by the hope of reward, were engaged—Constance Kent was examined and cross-examined five several times, yet not one particle of evidence could be found that had the slightest tendency to criminate her. Not only did the attempt to prove her guilt signally fail, but the effect of the searching examination to which she was subjected must, to any reasonable mind, have had the effect of proving affirmatively her innocence.

Is it possible to suppose that a girl of sixteen, if guilty, could have baffled such an array and withstood such an ordeal?

We now lose sight of Constance Kent until the month of August 1863, when she was admitted as an inmate of a kind of conventual establishment, called St. Mary's Hospital, at Brighton. There she remained until the 25th April 1865, when she was brought by the "Lady Superior" and the Rev. Mr. Wagner, who appears to be a kind of chaplain to the institution, to Bow Street, charged on her own confession with the murder of her brother. Mr. Wagner produced a paper, stated by him to have been received from Constance Kent, and which was admitted by her to be in her handwriting. It was in the following words: "I, Constance Emelie Kent, alone and unaided, on the night of the 29th of June 1860, murdered at Road Hill House, Wiltshire, one Francis Saville Kent. Before the deed no one knew of my intention, nor after it of my guilt. No one assisted me in the crime nor in the evasion of discovery."

Will anyone believe that this formal document, which might, from its language, have been drawn up by an attorney's clerk, was the genuine and spontaneous burst of expression from the lips of a girl seeking to unburden her soul from a load of

long-concealed guilt? No doubt it was her handwriting; no doubt she admitted it before Sir Thomas Henry to be hers; but who drew it up?

Many years have not elapsed since a clergyman, no less respectable than the Rev. Mr. Wagner, avowed at the bar of the House of Lords that he had drawn up a confession of guilt in the form of a prayer, and commanded an accused person to "go down on her knees and pray that prayer," and then appeared as a witness against her to prove the confession so obtained.*

A more able, experienced, patient, and humane magistrate than the late Sir Thomas Henry it would be impossible to find, but his duty in this case was little more than ministerial, and having satisfied himself that this confession had not been obtained under such circumstances as would render it inadmissible in evidence, all he had power to do was to remit the case to the magistrates of Wiltshire, within whose jurisdiction the crime had been committed. The Wiltshire justices thereupon committed Constance Kent to trial, and on the 20th July 1865 she was arraigned before Mr. Justice Willes, pleaded guilty, and was sentenced to death—a sentence afterwards commuted for imprisonment for life. Here, so far as any public or judicial inquiries are concerned, the case ended.

A letter, dated the 24th August, appeared shortly afterwards in the public papers. In this letter, Dr. Bucknill states that he examined Constance Kent by permission of the Lord Chancellor. By whom Dr. Bucknill was selected for this important duty, or by whom the solicitor who seems to have been joined with him in the inquiry was employed, does not appear.

The following is Dr. Bucknill's account:—

"Constance Kent says that the manner in which she committed her crime was as follows: A few days before the murder she obtained possession of a razor from a green case in her father's wardrobe and secreted it. *This was the sole instrument she used.* She also secreted a candle, with matches, by placing them in a corner of the closet in the garden where the murder was committed. On the night of the murder she undressed herself and went to bed, because she expected her sisters would visit her room. She lay awake, watching, until she thought that the household were all asleep, and soon after midnight she left her bedroom and went downstairs and opened the drawing-room door and window shutters. She then went up into the nursery, withdrew the blanket from between the sheet and the counterpane, and placed it on the side of the cot. She then took the child from his bed and carried him downstairs through the drawing-room. She had on her nightdress, and in the

* Minutes of Evidence, House of Lords, Talbot Divorce Bill, 1857; Question 1995. Evidence of the Rev. Robert Gage.

drawing-room she put on her goloshes. Having the child in one arm, she raised the drawing-room window with the other hand, went round the house, and into the closet, *lighted the candle, and placed it on the seat of the closet, the child being wrapped in the blanket and still sleeping, and while the child was in this position she inflicted the wound in the throat.* She says *she thought the blood would never come, and that the child was not killed, so she thrust the razor into its left side, and put the body, with the blanket round it, into the vault.* The light burnt out. The piece of flannel she had with her was torn from an old flannel garment placed in the waste bag, and which she had taken some time before and sewn it, to use in washing herself. She went back into her bedroom, examined her dress, and found only two spots of blood upon it. These she washed out in the basin, and threw the water, which was but little discoloured, into the footpan in which she had washed her feet over night. She took another of her night-dresses and got into bed. In the morning her nightdress had become dry where it had been washed. She folded it up and put it into the drawer. *Her three night dresses were examined by Mr. Foley, and she believes also by Mr. Parsons, the medical attendant of the family.* She thought the blood stains had been effectually washed out, but on holding the dress up to the light a day or two afterwards she found the stains still visible. She secreted the dress, moving it from place to place, and she eventually burnt it in her own bedroom, and put the ashes, or tinder, into the kitchen grate. On the Saturday morning, having cleaned the razor, she took an opportunity of replacing it, unobserved, in the case in the wardrobe. She abstracted the nightdress from the clothes' basket when the housemaid went to fetch a glass of water. The stained garment found in the boiler hole had no connection whatever with the deed. As regards the motive of her crime, it seems that, although she entertained at one time a great regard for the present Mrs. Kent, yet, if any remark was at any time made which, in her opinion, was disparaging to any member of the first family, she treasured it up and determined to revenge it. She had no ill-will against the little boy, except as one of the children of her step-mother. She declared that both her father and her step-mother had been kind to her personally; and the following is the copy of a letter which she addressed to Mr. Rodway on this point, while in prison, before her trial :—

“ Devizes, May 15.

“ Sir,—It has been stated that my feelings of revenge were excited in consequence of cruel treatment. This is entirely false. I

have received the greatest kindness from both the persons accused of subjecting me to it. I have never had any ill-will towards either of them on account of their behaviour to me, which has been very kind.

"I shall feel obliged if you will make use of this statement in order that the public may be undeceived on this point.

"I remain, Sir, truly yours,

"CONSTANCE E. KENT.

"To Mr. Rodway."

"She told me that when the nursemaid was accused she had fully made up her mind to confess if the nurse had been convicted, and that she had also made up her mind to commit suicide if she was herself convicted. She said that she had felt herself under the influence of the devil before she committed the murder, but that she did not believe, and had not believed, that the devil had more to do with her crime than he had with any other wicked action. She had not said her prayers for a year before the murder, and *not afterwards until she came to reside at Brighton. She said that the circumstance which revived religious feelings in her mind was thinking about receiving the Sacrament when confirmed.*"*

Such, word for word, is the account given by Dr. Bucknill of the confession of Constance Kent—not one syllable of this appeared either before Sir Thomas Henry at Bow Street, before the magistrates at Trowbridge, or when she pleaded guilty before Mr. Justice Willes.

No step, so far as I can ascertain, appears to have been taken to compare the statements made by Constance Kent to Dr. Bucknill with the facts proved five years before during the inquiry at Road. Yet this was clearly the first thing which ought to have been done for the purpose of ascertaining whether the confession of guilt was not in this, as it has been in numberless cases, the mere product of a diseased imagination.

The very careful evidence given by Mr. Parsons, the surgeon, on the former inquiry, affords an obvious and most valuable means of applying this test.

He describes the wound in the throat, which was the cause of the death of the child, as "dividing the whole of the structures down to the spine," severing, therefore, the carotid arteries and other large blood-vessels. The discharge of blood must have been instantaneous and violent. Constance Kent says she *thought the blood never would come*. If it be urged that Mr. Parsons afterwards expressed an opinion that the death might have been occasioned by suffocation before the infliction of the

* *Annual Register*, 1865.

gash on the throat,* and that therefore the spurting of blood from the arteries would not have taken place. This is equally inconsistent with the confession, in which no mention whatever is made of any violence having been inflicted upon the child until its throat was cut, and that it was *asleep* at the time.

The next contradiction is even more remarkable.

Mr. Parsons states that the instrument with which the wound in the side was inflicted had passed through the nightdress and flannel, which it appears that the child wore, cut through the cartilage of two ribs, penetrated the diaphragm, and slightly wounded the outer coat of the stomach. This wound, in his judgment, had been inflicted by a "*dagger-shaped knife like a carving knife*," and even with such a weapon it would, he says, "have required great force to inflict such a blow through the nightdress and to the depth to which it had penetrated." Constance Kent says expressly that a *razor* "was the sole instrument she used," and she says afterwards that, thinking the blood would never come from the gash in the throat (!), and that the child was not dead, she "thrust the razor into its left side."

Now, to *stab* with a razor is simply an impossibility, and if anyone doubts it, let him make the experiment upon some substance which shall afford a resistance even far less than that offered by a nightdress, a flannel, and the ribs of a "very heavy child" of nearly four years old. The comparison of the confession of Constance Kent with the evidence of Mr. Parsons, appears to be so conclusive of the utter worthlessness of that confession as evidence of her guilt, that had it been brought to the notice of Sir Thomas Henry, of the Wiltshire magistrates, or of Mr. Justice Willes, the probability is that the result would have been that Constance Kent, instead of being condemned as one of the most atrocious monsters that ever disgraced humanity, would have been regarded as the victim of a terrible, but by no means unfrequent, affliction.

It seems hardly necessary to pursue the inquiry into the minor inconsistencies of the confession with the facts. But it may be asked what became of the candle which burnt out in the closet? How happened Constance Kent to have a fire in her bedroom in the month of June, and to be able to burn a nightdress to ashes and place the ashes in the kitchen grate without attracting notice in a house so full of inmates and so carefully watched?

The person (whoever it was) that cut the child's throat must

* On his cross-examination on the 3rd October Mr. Parsons said: "My own impression is that the child was first suffocated by pressure on the mouth, and that after that the throat had been cut."

have been deluged with blood. Not "two spots only," not merely the nightdress, but the hands must have been drenched with blood. A razor can only be held close to the wound which it inflicts. What became of this blood? Everyone knows how little blood it requires to discolour a large quantity of water.

Be it remembered that upon the occasion when Elizabeth Gough was before the magistrates she was defended by an experienced counsel, who had, as I have before observed, every motive to test the evidence given by Constance Kent in the strictest manner. Had he been able to extract any fact from her which tended to raise a suspicion of guilt on her part, it would have tended also to the exculpation of his client. He was in possession of all the facts which had been elicited in the course of the inquiry, and also of all the information which he could derive from his client, the prisoner Gough. Had even a suspicion existed in his mind that there could be criminality on the part of Constance Kent, it would have been his duty to test her evidence by the strictest and most searching cross-examination,—a duty which he no doubt would have performed with ability.

Now, let the wild, contradictory, and most improbable story which she told to Dr. Bucknill, five years after the event, and after two years of seclusion from the world under the spiritual guidance of the Rev. Mr. Wagner—her memory full of the horrors of that fatal night, and her soul oppressed by the dark cloud of suspicion which she knew was hanging over herself and everyone that was dear to her—be compared with the simple and plain tale told under the sanction of a judicial inquiry, and subject to the test of hostile cross-examination by a skilful and experienced counsel, and let it be asked which bears most strongly the indications of truth?

Is it strange that her reason should have given way, and that she should have fancied that she had been an actor in scenes which had impressed themselves so vividly on her memory and her imagination?

If it be asked, why did no one come forward to demand investigation? the answer is obvious. Those who felt that they were innocent, that an unjust suspicion had attached to them, must have accepted with gladness a confession which relieved them from suspicion. Anyone who felt conscious of guilt had even a stronger motive for silence.

I have already said that I do not suggest criminality in anyone. Indeed, I think that the opinion generally entertained, that the crime must have been committed by some one of the inmates of the house, has been arrived at somewhat too hastily. That the murderer must have been in the house when the child was abstracted is no doubt clear, but there is no proof of the

return of the criminal. Indeed, the evidence rather tends to an opposite conclusion. Had that been the case, it would have been next to impossible to have destroyed all traces of the crime.

The case, therefore, rests solely on the confession of Constance Kent.

"Confessions," says Blackstone, "are the weakest and most suspicious of all testimony."*

"Confession," says Lord Stowell, "is a species of evidence which, though not inadmissible, is to be regarded with great distrust; and though it is evidence which is not absolutely excluded, but is received *in conjunction with other circumstances*, yet it is on all occasions to be most accurately weighed."†

The distinguished German jurist, Heineccius, says: "Confession is sometimes the voice of conscience. Experience, however, teaches us that it is frequently far otherwise. There sometimes lurks under the shadow of an apparent tranquillity, an insanity which impels men readily to accuse themselves of all kinds of iniquity. Some, deluded by their imagination, suspect themselves of crimes which they have never committed. A melancholy temperament, the 'tædium vitæ,' and an unaccountable propensity to their own destruction, urges some to the most groundless confessions, whilst they are extracted from others by the dread of torture or the tedious misery of the dungeon. So far is it from being the fact that all confessions are to be attributed to the stings of conscience, that it has been well said by Calpurnius Flaccus, 'Confessio voluntaria suspecta est,' and by Quintilian, 'A suspicion of insanity is inherent in all confessions.'"‡

Justly has the same author remarked, that "a religious duty is cast on the judge to guard well lest an innocent person should be betrayed by this most foul species of false accusation, and punishment fall on those who are guilty of no other crime but that of calumny against themselves."

The tendency of the human mind to imbibe false impressions of guilt is well known, and examples are of constant occurrence.

Hardly any crime of an exciting nature is committed, but some one is found to come forward and avow that he is the culprit. This has happened recently with regard to more than one of the murders committed within the last few years in the metropolis, the perpetrators of which have not been discovered.

The purest life and the highest intellect afford no protection against this terrible malady. The poet Cowper was con-

* Com. 4, 357.

† Williams v. Williams, 1 Con. 304.

‡ Hein. Ex. 18, 22.

stantly oppressed with the consciousness of having committed some crime of the deepest dye.

A gentleman of high character and social position has left a record of the creations of his disordered brain during a state of mental derangement. One delusion that vividly impressed itself on his diseased consciousness, was that he had "entered the sacristy of a monastery in Portugal, assassinated the vicar, stolen his money and garments, disposed of them, and fled to Cintra."* Happily he was consigned to medical and not clerical care, and after a time was restored to sanity and to his friends. From the earliest periods of which we have any records, cases of this kind have been of frequent occurrence in the courts of justice in all countries.

One of the best authenticated, and, from the accompanying circumstances, most interesting among the early cases, is that of the Perrys, executed for the supposed murder of Mr. Harrison, in 1660, and popularly known as "The Campden Wonder." It is to be found in a note to the case of Captain Green, 14 How. State Trials, 1313. The facts were shortly as follow: An old gentleman of the name of Harrison, residing at Campden, in Gloucestershire, having gone to a village in the neighbourhood to collect some money, and not returning as was expected, his servant, John Perry, was sent to meet him. Neither returned that night, and the next morning Mr. Harrison's son went early in the direction of the village to which his father had gone the previous day. On his way he met John Perry returning. In the course of the day circumstances were discovered which tended to show that Mr. Harrison had been subjected to foul play, and suspicion attached strongly to Perry, who was taken into custody. At first he stoutly denied his guilt, but after some days he desired to unburden his conscience to a magistrate, and then he gave a most minute and detailed account of the murder of his master by himself, his mother, and his brother. The readiness with which his delusion adapted itself to circumstances as they arose, and wove them into his narrative, is marvellous. Thus, it happened that Richard Perry accidentally drew out of his pocket a cord, with a noose at the end of it, and upon its being shown to John Perry, and his being asked if he knew it, he "shook his head and said Yes, to his sorrow; for that was the string his brother strangled his master with." Upon this confession, coupled with other circumstances of suspicion, the three Perrys were executed.

In about two years Mr. Harrison returned to Campden alive and well. He gave a romantic and not very credible

* *Narrative of a Gentleman, &c.*, published by Effingham Wilson, 1838.

account of his absence, the real cause of which has always been involved in considerable mystery. It was clear, however, that he had not been murdered, and it did not appear that the Perrys had anything to do with his disappearance, or knew anything about it. The whole case will repay a careful perusal.

Dr. Southwood Smith, in his Lectures on Forensic Medicine, mentions the following very remarkable case:—

“In the war of the French Revolution, the ‘Hermione’ frigate was commanded by Captain Pigot, a harsh man and a severe commander. His crew mutinied and carried the ship into an enemy’s port, having murdered the captain and many of the officers under circumstances of extreme barbarity. One midshipman escaped, by whom many of the criminals, who were afterwards taken and delivered over to justice one by one, were identified. Mr. Finlaison, the Government actuary, who at that time held an official situation at the Admiralty, states: ‘In my own experience I have known, on separate occasions, more than six sailors who voluntarily confessed to having struck the first blow at Captain Pigot. These men detailed all the horrid circumstances of the mutiny with extreme minuteness and perfect accuracy; and, nevertheless, not one of them had ever been in the ship, nor had so much as seen Captain Pigot in their lives. They had obtained by tradition, from their mess-mates, the particulars of the story. When long on a foreign station, hungering and thirsting for home, their minds became enfeebled; at length they actually believed themselves guilty of the crime over which they had so long brooded, and submitted with a gloomy pleasure to being sent to England in irons for judgment. *At the Admiralty we were always able to detect and establish their innocence in defiance of their own solemn asseverations.*’”*

The thousands of miserable wretches who perished at the stake or on the gallows for crimes which we now know it was impossible to commit, almost invariably confessed their guilt, generally accompanied by the most minute details. “Alas!” exclaimed poor Isabel Gowdie, after her four days’ confession of her intrigues with the devil, and her visits to fairy land, “I deserve not to be sitting here, for I have done so many evil deeds, especially killing of men. I deserve to be rievín upon iron harrows, and worse if it could be devised.”†

We have left off burning witches, but in the reign of Queen Anne, in the days of Pope, of Swift, and of Addison, the Rev.

* *London Medical Gazette*, Jan. 20, 1838, p. 627.

† *Pitcairn’s Crim. Trials*, iii, ap. vil.

Godfrey Gardiner, rector of Walkerne, a village in Hertfordshire, the Rev. Francis Bragge, Vicar of Hitchin, and Sir Henry Chauncy, serjeant-at-law, Recorder of Hertford, a Welsh judge and author of the "History of Hertfordshire," prosecuted an unhappy woman of the name of Jane Wenham for witchcraft, at the assizes at Hertford. The jury found her guilty for *conversing with the devil in the shape of a cat*. She confessed, and was sentenced to death. Happily she was tried before Powell, a man of sense and humanity, and by his intervention her life was saved, and she lived many years, supported by Colonel Plumer and Earl Cowper.*

An unhappy woman of the name of Hickes and her child, a girl of nine years old, had not the same good fortune. They were prosecuted for witchcraft at the assizes at Huntingdon, before Justice Wilmot. They were "visited by several divines," they confessed their crime, and were hanged at Huntingdon on the 28th of July 1816.† Yet Wilmot was a judge no less respectable than the late Mr. Justice Willes. Were I to proceed further with instances of this kind they would fill volumes. Those who may wish to pursue the inquiry will find ample stores to repay their curiosity in the State Trials, in Pitcairn's Criminal Trials, and in the writings of Sir George Mackenzie, of Bodin, and of Wier.

I have laid before the reader all the evidence that, after a careful search, I have been able to discover with regard to this murder—

Murder most foul as in the best it is,
But this most foul, strange, and unnatural.

I have also given the grounds for the conviction at which I have arrived, that Constance Kent has been guilty of no crime but that of "calumny against herself." That she has fallen a victim to thick-coming fancies, groundless creations engendered in her brain by a diseased imagination dwelling on circumstances of inexpressible horror, and fostered by seclusion and religious terrors till they assumed to her mind the aspect of realities.

The mystery of the Road Murder, in my opinion, is not yet solved.

* See a report of this trial, *Blackwood's Magazine*, May 1859.

† *Gough's Brit. Topog.* vol. i. p. 439; *Blackwood's Magazine*, May 1859, p. 580.

ART. II.—MIND AND LIVING PARTICLES.

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MODERN neurologists are guilty of a serious and culpable error in their attempt to explain mental phenomena by a hasty generalisation from the very few facts that are known respecting the nature and properties of the ganglionic cells, so extensively diffused throughout the cortical substance of the brain.

Their hasty and illogical conclusions would have mattered comparatively but little, if the question at issue had reference only to physical science; but when their haphazard speculations tend to shake a belief in the independence of the human mind—a belief that has been upheld by the greatest philosophers both of ancient and modern times—they might surely have paused before enunciating doctrines which, if true, would make man an irresponsible agent, and sap the foundations of morality and religion.

We feel ourselves compelled to refer again to this topic, in consequence of the appearance of an article on “Mental Physiology,” in the *Edinburgh Review* for January 1879, in which the writer endorses some of the boldest and most extravagant views of the modern school of physiology.

The convolutions of the brain are no doubt connected in some mysterious and, as yet, inexplicable manner with the operations of the mind, but the bold attempt of physiologists to explain them by the same laws as those which regulate the functions of the nervous system, is as fallacious as it is mischievous. We will now proceed to examine critically the various points in the article referred to on which we are at issue with the writer.

The terms “Mental Physiology,” and “Physiology of the Mind,” adopted by the physiologists, have led to much confusion of thought. The neurologists, by jumbling physics and metaphysics together, have greatly exercised the public mind: they are attempting to revive in a modified form the pseudo-science of phrenology.

The writer in the *Edinburgh Review*, following in the wake of Gall and Spurzheim, lays it down as an axiom, that in people of strong intellectual character the brain mass is large. Instances can no doubt be adduced of the coincidence of great intelligence with largely developed cerebral convolutions, but

the converse holds equally good. Be this as it may; if it be true, as we hold, that the mind is an entity, a first principle, which acts through the medium of the brain, the size of this organ becomes of comparatively secondary importance.

After admitting, with an inconsistency so common with this class of writers, that the so-called operations of the brain have to be submitted to a higher principle, he goes on to observe, that the *brain substance* itself accomplishes the task of transmuting the impressions of sense *into ideus*. The term "idea" has been always looked upon by the common consent of mankind as synonymous with thought, or conception. Without, however, going into metaphysical subtleties, it must be admitted that our ideas are among the highest manifestations of the mind, and as yet it has been found impossible to account for them by any physical laws.

Speaking of the sensory ganglia, he says: "They take *cognisance* of sensuous impressions that are sent to them from the outside world, and also of cerebral or mental states that are signalled back to them from within"—thus endowing brain cells with the mental faculty of cognisance. He goes on to observe: "Some physiologists have indeed conceived that an idea is substantially a sense—impression stamped upon the brain-pulp. Others have preferred to consider an idea as a vibration of brain-molecules, called up by an impression of sense. For any practical purpose it is not of material consequence whether either of these hypothetical fancies is adopted, or whether the change is summarily spoken of as a mental state."

We cannot help feeling surprised that a leading journal should coolly tell the public that it matters little if they believe that ideas are merely a vibration of brain-molecules—a machine, as it were, managed by a sort of limited liability company of ganglionic cells, who are responsible, and not the individuals themselves, for any evil thoughts which may be produced by the movements of the machinery. The following passages, however, referring to mental operations, are written in a different spirit:—"Scientific men, in sober truth, do not know more of the forces which they term gravitation, and electricity, and heat, than they know of the operations of the mind." . . . "The metaphysical phenomena which psychology deals with are, at any rate, quite as tangible realities as the imponderable fluids, invisible vibrations, infinitesimal atoms, and supersubtle polarities of the physical philosophers." Notwithstanding this admission, the writer goes on to assert that ideas are registered in the brain structure; and, in support of his opinion, quotes the views of one of the most pronounced materialists of the day, who surmises that the failure of memory in old age is the

result of the impairment of the brain structure. No doubt, when man reaches the seventh stage of existence, there is incipient decay of most of the structures of the body, but it is a *petitio principii* (that bane of modern science) to say that the inability to recall ideas depends on the withering away of the nerve threads in close proximity with the ganglionic cells. This author, as quoted by the "Edinburgh" reviewer, dogmatically asserts that every impression of sense upon the brain leaves behind it some modification of the nerve element concerned in its function. He elsewhere speaks of mental *functions*, as if he considered that thoughts were merely secreted by a physiological process. He believes that ideas are so firmly impressed on the molecules of the brain, that of no mental act can it be said that it is "writ in water." But if memory were nothing more than the impression of ideas on the molecules of the brain, they would be writ in water, for it has not yet been shown that the cells of the brain are exempt from that law of constant renewal which generally obtains in the soft tissues of the body. As I wrote in a former article in the *Journal of Psychological Medicine*:—"If the brain be of such a perishable nature, it is incredible that images or ideas impressed by any merely physical process on the cells of the brain could be vividly recalled after a long period of time, when the matter of the very cells which were supposed to have received them had been replaced by new matter." The writer in the "Edinburgh" seems, so far, to be of the same opinion, for he says: "The brain-pulp, upon which the registration of memory is effected, is one of the most evanescent and delicate of the structures of living organisation. Its ganglion-globules are in a state of unceasing change." He is therefore driven to confess that the only feasible explanation of the marvels of memory, is that the impression "is retained by some faculty of the intellect, which is independent of physical change." In the hand-to-hand conflict between materialism and immaterialism, the side which relies strictly on facts and curbs the imagination must ultimately be victorious. The writer, however, in the following passages, leaves the safe and sober path of inductive reasoning, and gives the reins to his fancy. In referring to the recent experiments of Hetzig, Fritsch, Ferrier, and others, of trying to determine by electricity the centres of motion in the brain, he observes: "There can be no doubt that in these experiments *ideas* were excited in the brains of the *insensible* animals by the physical agency of electrical currents. The brain-convolutions in reality consist of a number of distinct *mind-centres*, spread out in a kind of vault over the subordinate centres of nerve-action, which have the charge of consciousness, and

are arranged layer above layer." What a boon this will be to a poor author, who has to cater weekly for the gratification of the public, to find that when his ideas are exhausted he can command a fresh supply by passing electric currents through his brain !

We are far from desiring to underrate the utility of the recent experiments, instituted with a view to discover the centres of motion, but their value has been greatly exaggerated, and we do protest against the notion that physiologists are able, as yet, to localise *mind*-centres. However, leaving out of the question mental phenomena, which are above and beyond the mere bodily function of motion, we are compelled to reiterate the statement which we made four years ago, that no great neurological fact has been added to our knowledge since the discoveries of Sir Charles Bell and Marshall Hall.

The crudities of modern materialistic physiologists have led to great entanglement of ideas, by the introduction of innumerable new terms to designate their hasty and unwarrantable generalisations. This practice is essentially opposed to the first principles of logical reasoning. The public have of late been informed that a new function of the brain has been discovered, which has been termed "unconscious cerebration." If this were true, it would reduce all human beings to mere automata : it simply and most unreasonably implies that thought can be carried on without consciousness—in old-fashioned and intelligible philosophic language, that the higher faculties of the mind can be exercised independently of the mind itself ! The writer in the "Edinburgh" speaks of this anomalous theory as if it were an established truth, and gives the following contradictory explanation of it. He says it "means simply that the human brain is capable of carrying on long trains of mental operations on its own account, when it is once fairly started on the track, and of finally *arriving at conclusions* which can be received *as conscious ideas*, although there has been *no consciousness* whatever of the process by which the operation has been conducted."

Another incomprehensible notion allied to unconscious cerebration, is, what the advanced physiologists have named *ideo-motor* actions, involuntarily performed under the direction of ideas. As, therefore, the former relieves us from all responsibility as to our thoughts, so the latter exonerates us from all the blame of evil actions. Very comfortable doctrines these for those who desire to follow the bent of vicious inclinations without let or hindrance. The chief facts which gave rise to these theories are those connected with walking, and with the rapid movements of an accomplished musician's hands ; and

the singular manner in which a person recalls to his memory a word or thought that seemed utterly forgotten. As regards the first, it is probable that when a command over any particular set of muscles has been obtained, the amount of attention given to the direction of the movements is so small, and the recognition of it so faint, as to escape the memory. The second instance may be accounted for by the laws of mental association.

The writer in the "Edinburgh" draws the following conclusions from what he considers the recent progress in scientific discovery: That, "with every expression of a *mental* state, and with every action of the *mind*, some structural change occurs in the substance of the brain." That "the change which occurs in the brain is of a destructive character. A complex unstable substance, formed out of the blood and deposited in the brain-globules, is decomposed and destroyed by the agency of oxygen. The nerve-influence and *mind*-action are energies evolved as a consequence of that decomposition. The brain-pulp is burned by the agency of oxygen, for the production of brain-force." That, "the blood circulation both wastes and sustains the brain, and in that way promotes its *mental* functions." That "the transmission of nerve-influence and *mind*-force between the several aggregations of globules, and between globule and globule, is effected by means of a destructive decomposition of the pulp of the nerve-threads which meander about amongst them in all conceivable directions."

We must protest against the acceptance of these hypotheses as absolute truths. Had the question at stake been less momentous than that of the immateriality of the mind, their dissemination might have been of little consequence; but when the issue is so tremendous, it is right that the general public, for whom the editor of the "Edinburgh" writes, and who cannot be expected to be familiar with the principles of a recondite and intricate science, should be cautioned against accepting mere speculations as verified facts. In a strictly physiological journal they would be not only justifiable but valuable, as a means of stimulating research.

A brief consideration of the writer's conclusions will be sufficient to show that they are striking examples of the *petitio principii* fallacy. Neither the writer nor anyone else has demonstrated that with every act of the intellect some structural change occurs in the substance of the brain, that mind-action is the result of chemical decomposition of brain-pulp, or that the transmission of mind-force between the several globules of the brain is effected in the same manner. The brain is confined in a bony case which renders it impossible to watch its vital

operations through the microscope; and the dead ganglionic cells, which have been minutely examined, are as different from living ones as a corpse from a living body. In the concluding remarks, however, the writer contradicts the opinions here expressed, and shows that, like Professor Tyndall in his better moments, he takes a less material view of the subject. He says: "An unfathomed abyss still stretches out beyond the most advanced ground won by the adventurous explorations of physiologists. . . . The moral and intellectual faculties of man belong to a region for which physical science has no language and no explanation." Yes; and the foundation on which our faith in the independence of the human mind rests, stands unshaken by the discoveries of modern science.

An interesting and original essay by Dr. Daniel Clark, with a novel title—"An Animated Molecule and its Nearest Relatives"*—has recently been published at Toronto. As it also appeared *in extenso* in the "American Journal of Insanity" for October 1878, it would seem as if the author's views had attracted a considerable amount of attention in his own country, and it is therefore right that they should be fully and fairly discussed in an English journal.

The author has not defined what he precisely means by an animated molecule. The smallest living particle with which we are acquainted is a bioplast, the marvellous properties of which have been revealed to us through the profound and original researches of Professor Lionel Beale; I shall therefore, in my remarks, consider that the term "animated molecule" is synonymous with bioplast, and signifies the minutest portion of vital matter which the microscope has yet brought to light. The author divides all inquirers who are endeavouring to discover the basis of life, into three classes—the subjectivists, the objectivists, and the eclectics, who seek to learn from every source "whether a man be a unity, a duality, or a trinity, and what are the relations of this sphinx which is continually propounding so many enigmas for our solution." He starts with the following premises:—

"First. That it is not in accordance with physiological and pathological facts to call mental phenomena functions of the brain.

"Second. That no evidence adduced has satisfactorily established the localisation of mentality beyond the focal point of nerve-tissue in the basal ganglia of the brain.

* *An Animated Molecule and its Nearest Relatives.* An Essay read before the American Association of Medical Superintendents of the Insane at Washington, D.C., on May 10, 1878, by Daniel Clark, M.D., &c. Toronto, 1878.

"Third. That brain power is not dependent on the size of the organ only, but requires many other conditions to manifest its durability and intensity.

"Fourth. That psychic force correlates to some extent with magnetism, and is probably a higher power of the same substance, and presumably is the most subtle form of material existence known to man.

"Fifth. That this entity exists in the nervous system of all animals and beings possessing this structure, not depending on a molecule for its existence; but, on the contrary, the molecule could have no being without its constructive power. The maker of the molecule necessarily antedates the creation, and manifests the occupancy of the tenement in a series of functions numerous and complicated.

"Sixth. That the intensity and complicity of mental modes, *ceteris paribus*, do depend on the condition and capacity of the organ, and that the intellectual and moral powers decrease in a certain proportion as the instrument diminishes in efficacy (as a magnet decreases in power according to its size), until only automatic or reflex life remains. In other words, the descending series of psychism, vitality, electricity, leave in the inverse order to that in which they built up the system, until dust to dust manifests the ultimate elements in their primal form, with only a low grade of cohesive power remaining.

"Seventh. That the different phenomena of mind in health and disease can be explained satisfactorily to my mind, if the views stated be accepted, without leading to illogical conclusions.

"Eighth. That no appeal has been made to arguments and deductions beyond accepted phenomena, and only by legitimate conclusions drawn from evidence furnished by the senses."

With regard to the first and third of these propositions, we are at one with the author, and the arguments which we adduced in the earlier part of this article will tend to confirm them; but we are opposed to the second and fourth. We do not admit that mentality*—if by that newly coined word the author means capability of mental acts—can be located in any particular part of the brain. Neither can we subscribe to the opinion, that psychic force correlates with magnetism, and is probably a higher power of the same substance. The majority of modern physiologists, after long and careful experiments, have come to the conclusion that nerve currents and electric currents are not

* The word "mentality" was first used, we believe, by the late G. H. Lewes. It does not give additional force to materialistic speculations; and it is not in accordance with sound philosophy to call the power of thinking mentality, nor to say when a man is thinking that he is cerebrating.

identical. Although electric currents have been observed passing along living nerve texture, they are now regarded only as accidental, and not of an essential character. It is a mere assumption to say that psychic force correlates with magnetism: and we must repeat what we have said in a former treatise, that the word "correlation" is very frequently used in a vague manner to imply that two forces are identical, and to reconcile phenomena which have nothing in common. If by "correlation" the author means "correlation of force," it is perfectly clear that Grove's doctrine will not support his hypothesis, as not a single instance can be recorded in which psychic and physical forces have been found interchangeable. In the present day it is the practice of many scientific writers to use the terms correlation, evolution, and potentiality, to account for things that they cannot explain. They are used in a sort of hocus-pocus fashion. For instance, if it is asked, How did man originate?—the ready answer is, By evolution. What is life?—The potentiality of atoms. What is mind?—A correlation of magnetic and psychic forces. The energy which animates a living particle is so distinct from any physical force that their mutual convertibility is impossible. Dr. Clark himself has justly observed: "We see organisms of the lowest order multiply their kind by a division of themselves. This inherent power causes these separate parts to have a family resemblance. Each of these has a power to move, to feed, to grow, to multiply, and to have a harmony of action in all its parts. No such complicity of power can be seen in chemical action and affinity;"—but we must add, that whilst agreeing with Dr. Clark that this inherent power is not the physical result of chemical action, that neither can this vital energy be shown to be the result of electricity or any other physical force, although it may be admitted that electricity, as well as chemistry, acts a subordinate part in the animal economy.

The fifth, sixth, and seventh propositions assume that a psycho-magnetic sort of vitalism, not only produces and presides over the functions of all living animals, but that the phenomena of the mind can be accounted for on the same principle.

The eighth, and last, of his premises expresses the author's belief that his conclusions are strictly in accordance with all that is known of the laws of mental, vital, and physical phenomena.

To each and all of these we have already replied by mentioning facts, which militate against the writer's views. We will now go on to discuss at greater length the question, whether mind and vital action are both and each of them no more than modifications of electric action.

The striking resemblance between the manner in which messages are communicated by the telegraphic wires and that of the transmission of nerve-influence through living fibres, has led to the conclusion that the two processes are of the same nature. The most recent experiments of physiologists tend to show, that though apparently similar, they are, in truth, of an essentially different character.

At one time an experiment of Galvani's was supposed to be conclusive as to the identity of electric and nerve currents. He exposed the nerve of a frog's leg, and connected two points of the exposed nerve by a piece of curved metal. By this means he detected an electric current through the nerve. Subsequently, however, Volta's interpretation of the fact was accepted, and generally adopted. He said that the metal was the chief agent in the experiment; and that, when two heterogeneous bodies are placed in contact, one of them assumes the positive and the other the negative electroid condition. Hermann and others are convinced that many of the electrical manifestations noticed in nerves and muscles are merely the result of chemical changes; and up to the present time there are no conclusive proofs that vitality and electricity are the same force. Dr. Clark has been entirely misled by assuming the accuracy of an experiment of Becquerel's, on which he has laid great stress. In describing this experiment, he says, that if the nerves of the rheoscopic limbs of two frogs are connected by cotton-wick saturated with water, and the nerve of one is pinched, or any irritant applied, the influence crosses the foreign cotton-wick isthmus and causes contraction of the distal limb. He also states, we think on insufficient grounds, that a "transmission of nerve-force explains much that is otherwise inexplicable, where there is diffidence or disorganisation of nerve tissue, for even then its power of conveying this agent is not destroyed." With a view of obtaining the latest and most precise information on two points of so much importance as the conveyance of nerve-force through a cotton-wick, or its transmission through a disorganised nerve, I asked Mr. Lowne, the lecturer on physiology at the medical school of the Middlesex Hospital, to give me his opinion on both points. Mr. Lowne has recently been engaged in making original and delicate experiments with regard to the functions of the nervous system; and his qualifications and attainments are so fully recognised, that he has been appointed Professor of Anatomy and Physiology at the Royal College of Surgeons of England. He has courteously replied to me as follows: "The nerve-current cannot be passed through such a medium as cotton-wick, even when moistened with chloride of sodium, which would

increase its power of conveying an ordinary electrical current. The evidence is exceedingly strong that there is no electrical current in a living nerve except it be injured."

"If a nerve is severed by a knife, or a portion of it destroyed by disease, the nerve-current is interrupted."

"If a nerve be cut, and its cut ends carefully applied to each other, no nerve-force can pass. Electricity would pass perfectly."

In the present state of our knowledge, we therefore are not justified in assuming that nerve-force and electrical-force are interchangeable, and we have failed to discover, from Dr. Clark's ingenious speculations, any proof that an animated molecule has any relatives near or distant. It has been clearly established by the highest authorities, that a living cell is the minutest element in which any signs of life have been discerned. Its vital properties are totally distinct from those of any physical force, and it would scorn relationship, even in the seventieth degree of cousinship, to an electrified atom.

If Dr. Clark's hypothesis will not hold good with respect to vitality, it cannot, *à fortiori*, explain the operations of the human mind, or, as he terms it, psychism, which has nothing in common with the forces peculiar to matter, and belongs to the higher region of philosophy. Imagination, comparison, judgment, and will, cannot be gauged by the laws which govern the different modes of motion. The existence of these mental attributes is proved by our own consciousness; their undying records are indelibly inscribed on the literature, poetry, and art of centuries; and the innumerable attempts which have been made to explain their nature by materialistic theories have ended in unutterable confusion.

When Dr. Clark dismounts from his hobby of psychomagnetism, his observations on the functions of the brain are sound and well worthy of consideration, and tend to support the arguments in favour of the independence of the human mind. He remarks: "The results of disease in the physical manifestations of what Fritsch and Hitzig call the psycho-motor centres, present so many exceptions to the generalisations of localisers, that a verdict of not proven must at present be recorded against them." He refers to the researches of Brown-Séquard and Gintrac, with reference to cases of hæmorrhage in the convolutions, which prove that convulsions may appear as well on the side of the lesion in the brain as on the other side. He says Hitzig, Ferrier, Carville, Durst, and Northangel would persuade us that there is a centre for perception in the cortical substance of the brain. He goes on to observe:—"This is divided, in true phrenological style, into other circumscribed spaces, of dis-

ting mental power. At the same time they tell us that the occipital lobe can be destroyed without producing any effect on the sensibility; that the convolutions of this lobe, as well as those of the frontal, the insula, those of the internal faces of the hemispheres, and those of the suborbital, do not respond to electrical excitation; and that for the most part, lesions of these have little or no results. They think that ablation of the frontal lobes appears to lessen the activity of the intelligence, and that of the occipital extremity of each hemisphere seems to abolish the appetite. Orchansky, a celebrated pathologist of St. Petersburg, after numerous experiments on dogs and rabbits, with the electric current, and by vivisection on the motor-centres, candidly states, that the separation of the cortex into motor and non-motor parts rests probable upon an anatomical basis only, but is little known. In other words, there is no special cerebral vaso-motor centres, except in intimate relation with the general motor system, this consisting of the cord, central ganglia, and the convolutions, but this tripartite is in mutual relation and subordination. The careful experiments of Brown-Séquard go to show that this mechanism of voluntary action does not depend on clusters of brain-cells in one locality, but on the co-ordination of all the cells. The germ of the future therapeutics of brain disease may be indicated in the fact that paralysis is not always produced in the destruction or lesion of nerve matter, but often depends upon the influence exerted by disease upon parts at a distance. The supposed motor-centres can be destroyed without any paralysis at all. On the other hand, paralysis may occur in arm or leg, when it was the most anterior or posterior part of the brain—the part furthest removed from the supposed centre of motion—that had degenerated. Paralysis may be quite independent of the destruction of the tissue. It might result from the puncture of the smallest needle.”

Dr. Clark, in reference to an inconclusive experiment of Ferrier's on the brain of a monkey, quotes a remark of mine, which appeared in the *Journal of Psychological Medicine* for April 1878. Dr. Ferrier removed the whole of the occipital lobes of the cerebrum of a monkey, and then made the wonderful discovery, that its appetite was impaired. He thence inferred that that part of the brain was the seat of the appetite for food.

In spite of the exultation of many sanguine neurologists, who imagine that the recent experiments of passing electric currents through the brain are of such great importance, it still will be allowed by every candid observer, that the localisers have not yet proved their theory. Maragliano, one of the most strenuous supporters of these novel views, only ventures

to say modestly, that he thinks they will have a *tendency* towards the discovery of some general truth. Professor Pansch, of Keil, moreover, one of the very latest writers on the subject, is entirely opposed to division of the brain into lobes, and proposes that it should be divided into principal convolutions, and these again into smaller sulci, and gyri.

Dr. Clark sums up his observations with a hope that they may furnish a small plank of a common platform between subjectivists and objectivists, upon which all can stand, with consistent adherence to physical facts. The facts which we have brought under consideration in the preceding pages will, we think, suffice to prove that his magnetic plank has no resting place, and that any attempt to bridge over the mysterious region between mind and matter is as hopeless as the endeavour to span the space between our earth and the most distant fixed star.

ART. III.—MAD POETS.

No. 2.

This wretched brain gave way,
 And I became a wreck, at random driven,
 Without one glimpse of reason or of heaven.—MOORE.

ROBERT FERGUSON, 1750.

Religious Melancholia.

THE central points in the biography of this unfortunate man of genius are that he is first known as a rollicking student in the University of St. Andrews, next as an attorney's clerk, plunging in the intemperance which at one time characterised this class, then as a lunatic in confinement labouring under a mortal disease, and dying at a comparatively early age. He entered the university an incarnation of fun, folly, and frolic; and it is suspected that he utilised the classic groves of Academe for pensive loitering and golf-playing, that the Muses of his inspiration were chiefly the laughing Clio, the dancing Thalia, the heaven-yelep'd Euphrosynè. He received his education gratuitously, but hung out from his bedroom window a purse, to indicate his affluence, was instinct with mirth and mischief, quizzed his professors, tormented the hall-porter, wrote an elegy on this official, but had displayed so much gentleness and geniality of disposition in his persecutions that the supposed defunct described him as a "tricky callant, but a fine laddie for a' that." Touched to the quick by an allusion to the shabbiness of his dress, from those with whom he resided, to the effect that a visit to the tailor was more necessary than a visit from the Muses, the theological aspirant is next met with absorbed amid the deeds and dust of the commissary clerk of the Scotch metropolis, dreaming more of Crambo Clink than of engrossing. His compositions were couched in a Scotch dialect less mellifluous and colloquial than that of Burns, perhaps because he restricted himself to its exclusive use, got

up its Doricisms and Scotticisms at a time when they were passing into disuse and regarded as vulgar. It is painful to watch the death of a language, especially if it contains relics of Anglo-Saxon and far-distant antiquity. Scotch is evidently doomed to early extinction by gentility, fusion of races, &c., and political economists will rejoice o'er its premature decay. The present time and causes still in operation have swept away many similar vestiges of perishing peoples. It is said that about 100 years ago an old woman in Truro spoke the original British tongue. This must have been Gaelic; and now, notwithstanding the galvanisation of Professor Blackie, it is already extinct, or has migrated to America. Anthropologists are prone to stigmatize the Celt as an irreclaimable savage, as denied the survival of the fittest, as doomed to extinction or to fusion with nobler or more durable races. Can this bold denunciation or prophecy be advertised while we look on the recent ruler of the destinies of France, the representative of that heroic army of exiles who left their country, their hopes, their future, in loyalty to a fugitive prince, a ruined cause; or upon that descendant of some humble emigrant from the banks of the Spey, who recently led the armies of America to war, and then led them back to peace, and who is now gathering honours and the allegiance of all English-speaking freemen? But the names of MacMahon and Grant may in the mind of the caviller embody nothing more than the barbarian virtues which find expression in the charge, the chase, the carousal; assuredly they pale in the minds of all beside the names of Macaulay and Murchison, of the profound and eloquent exponent of history and of its heroes, and of the exponent of the structure, the progress, the duration of the world we inhabit. We are not certain but that to many he who painted with such exquisite—we might write patriotic—taste and success the “land of the mountain and the flood,” and that most characteristic feature of its brae-sides, the bowers of birk, Macculloch, or that she who has transmitted to us the lilts and lays which long resounded among the birchin shaws as the lament for “the good old creed and the good old cause,” and still linger as remnants of national melody, the Countess of Nairn, may not hold a higher and more endearing rank in the records of Celtic achievement. The craving for sudden and brief excitement so often claimed as a virtue is manifested under the form of vice in Celtic tendencies. The sluggish temperament may require an artificial stimulant ere it can be roused into enthusiasm or song.

Though attaining great prominence in our social system as statesmen, poets, philosophers, and men of genius, and exercising a robust and healthy influence over our national

life, the Scotch have ceased to be a separate people, and the doom of their language is sealed. Yet I have listened to Scotch in pulpit, bar, bench, and in polished society, and now it cannot be heard except in lyrics, sung by our grandmothers, or by damsels at "our ewes milking," if such a picturesque practice still exists in the "land of the mountain and the flood." As Ferguson's promotion in his master's office involved some of the duties of a tipstaff, he retained his position with narrow emoluments and narrower enjoyments. The latter consisted chiefly in the jollifications of some cellar tavern, where we can conceive that his own songs formed a staple supply of delight and drollery, tavern orgies which in a humbler and ranker form may be supposed to have resembled those described by Sir Walter Scott as "high jinks." How far these meetings were accompanied with excess and intemperance is not now known; but in every relation of life he seems to have secured kindness, and friendship, and love. The excitement, fatigue, and exposure of what is designated by some of his biographers as the "intemperate scenes of a country election," while he was under medical treatment proved too much for his delicate frame, and with the seeds of common catarrh were sown those of a more formidable affection of the nervous system. The symptoms were those of religious melancholia; and all attempts to restore reason and tranquillity by home treatment having failed, he was consigned to the rude and wretched Bedlam of the city, which had been constructed from the ruins of the offices erected by the promoters of the Darian scheme, in itself as wild and extravagant a delusion as ever flitted athwart the imagination of any of the inmates ultimately confined within its walls. There are two observations which are entitled to introduction at this point. The first is, that a very large number of poets, ranging from Cowley, Etheridge, Parnell, Denham, Lee, Moore, to those of lesser repute, have, either directly or indirectly, fallen victims to intoxication, seeking in it the dreamland or fairyland which the Indian finds in his haschisch, or the stimulation which over-taxed fancy may crave, or the temporary realisation of what their pen has described; and secondly, that in the depression which poets and a large proportion of men of imaginative mind experience may be discovered at once the provocative to stimulation, the ever-recurring palliation of excess, and the commencement of that series of emotive changes which renders the members of this class so prone to various degrees of moral unsoundness, if not to actual alienation. May not dejection or penitential despondency be the basis of dipsomania, and even of the repeated paroxysms of habitual drunkenness?

In the squalid, turfless airing-yard around this once lordly, but even then half-ruined mansion, of which Ferguson was an inmate, there stood until lately a solitary willow-tree, at the root of which—for its branches afforded no shade—he is described as often sitting with his book. But these calmer moments were but the prelude of rapid decay. It is probable that the poor invalid died of phthisis, and that the close of life might be cheered by that bright though deceptive gleam of hope so often present in this disease. Be this as it may, his actual departure was sad and sorrowful. “A few days before his dissolution, his mother and sister found him lying on his straw bed, calm and collected. The evening was chill and damp; he requested his mother to gather the bed-clothes about him and sit on his feet, for he said they were so cold as to be almost insensible to the touch. She did as he requested, and his sister took her seat by the bedside. He looked wistfully in his mother’s face, and said, ‘Oh, mother, this is kind.’ Then addressing his sister, he said, ‘Might you not come frequently and sit beside me? You cannot imagine how comfortable it would be. You might fetch your seam, and sit beside me.’ The mother and sister answered only with tears and sobs. ‘What ails you?’ said the dying poet; ‘why sorrow for me? I am very well cared for here, and want for nothing—only it is cold, very cold. You know I told you it would come to this at last. Oh, do not go yet, mother—I hope to be soon—oh, do not go yet! do not leave me!’ But the keeper motioned that the time was past, and they must depart. They never again saw Robert Ferguson in life. He was found a few mornings thereafter dead in his cell.”* The hardness and desertion here detectable were not necessarily signs of cruelty or indifference. The custodians of the insane a hundred years ago feared their patients and fled from them; or, regarding them as possessed by Satan or his emissaries, they fettered, it may be flogged, they chained, starved, stupefied, in order to subdue; subjugation being in such eyes the first step towards cure. Burns writes:—

Ill-fated genius!—heaven-taught Ferguson!
 What heart that feels and will not shed a tear,
 To think life’s sun did set ere well begun
 To shed its influence on thy bright career.
 Oh! why should truest worth and genius pine
 Beneath the iron grasp of want and woe,
 While titled knaves and idiot greatness shine
 In all the splendour fortune can bestow?

In touching so lightly upon the failings and temptations to which Ferguson was exposed, it must be notorious that

* The *Poetical Works* of R. Ferguson, with a Memoir of the Author.

they were the characteristics not merely of the class to which he belonged, but of the time in which he lived. Perhaps no educated man was distinguished by absolute sobriety, certainly none were abstainers. In my view of the subject, the craving for stimulants has become at different periods epidemic, as have many other appetites, passions, and peculiarities. There seems to be a rising, a falling, and a full tide in the vice or the disease of intemperance. There are waves of increase and decrease, and it has been affirmed that we are threatened with a deluge. In examining the very curious statistics submitted to the Commissioners appointed to inquire into the subject, these alternations are discoverable, although on the whole the maxim of indulgence has never reached so alarming a height as at present. Political economists declare that these changes depend upon the rise and fall of wages, and that the blessings of prosperity and abundant earnings always entail the danger, and at present the curse, of intoxication and degeneracy. This law may affect the industrial classes, but it cannot affect the community generally, as in the upper strata of society where no such fluctuations in income occur, and where the tendency to luxury in other respects has been most marked during the last fifty years, drunkenness, even deep drinking, are almost unknown.

The works left by Ferguson consist chiefly of eclogues, elegies, addresses to external nature, &c., and, considering his temperament and tendencies, it has been thought curious that so few expressions of a sensuous or a voluptuous kind are to be found in his writings. Not as a critical discovery but as a psychological fact, it should be mentioned that neither Coleridge, Wordsworth, nor Southey, all of them philosophical, if not metaphysical poets, and rich in feeling, abound in amorous epithets or addresses, not even in the higher manifestations of love. Yet the latter seems to have inspired even in his senile decay sentiments of the most exquisite devotion and self-sacrifice, of which his second marriage is a glorious proof.

CHARLES FENNO HOFFMAN (New York, United States), 1806.

Mania Errabunda.

The life of this poet reminds me of Turner's landscapes, where the elements are few and simple, the composition unelaborate, and where large portions require to be filled up by

the imagination. His mind-picture may be said to consist of a passionate and picturesque love and admiration for the woods and wilds, the haunts and habits of the children on the prairie and the hunting path, as they were retiring before eastern civilisation, and of a keen appreciation and power of representation of all that was romantic or beautiful in the history and pursuits and ultimate fate of those aborigines, while all the background on the canvas has to be occupied by the melancholy and monotony of twenty-five years in a mad-house. If Cooper was the annalist, Hoffman may be styled the poet of the Mohawks, Hurons, Iroquois, and all the nobler and gentler tribes before they were corrupted and annihilated by fire-water, vicious contamination, imported disease, and by manners and customs to which they fail to adapt themselves. He was a graft between the wild and the acclimatised vine. Alas that the memory of a spirit which understood and had almost mingled with the best and purest feelings of both races should have almost passed away with the children of the desert, except when a pensive tribute is awarded by a kindred heart (Bryant), and when some of the songs, such as "Monterey," and "Sparkling and Bright," are sung by those who know nothing of their origin!

From the college he passed to the desk of a lawyer, but, impatient both of learned and legal logic, he when a lad of sixteen seems to have emancipated himself from all thralldom, engaged in literary contributions to periodicals, and subsequently in a sort of nomadic life which combined the stimulus of some slight degree of danger with an introduction to some of the most genial as well as some of the grandest scenes of his then only partially settled country. The first and most pronounced instance of this love of adventure and unreclaimed nature occurred in 1833, when, on horseback and alone, he traversed many of the north-west and south-west states, encountering, perhaps courting, hardship, discomfort, snowstorm, and every vicissitude of weather. He was proud of this exploit, and published a narrative of his journey; but, according to a relative, he was afterwards constantly to be found on the waters or on the banks of the magnificent Hudson, and in the regions where his enthusiastic admiration of external nature and his interest in the Indian hunters who still lingered amid the primeval woods might be gratified. A very large portion of his verses exhale the very odour, repeat the musical sounds, paint the shade of the forest and the gleam of the fresh and sweeping savannahs, which he preferred to the marts of commerce or the busy hum of his fellow-men; and we find that about one half of his published poems are devoted to "Forest Musings" and

“Lays of the Hudson,” while many others commemorate events or scenes upon the border-lands between the allocations of the Red and White Man. They are the productions of a man of great sensibility with a poet’s lip and a painter’s hand, but not of great originality of genius.

This craving for solitude occasionally combined with vagabondage has been felt or affected by genuine poets as well as poetasters, chiefly of the Byronic or Corsair type. It is not necessarily misanthropical; it may be a desire for quiet or abstraction, or of a fair, unfrequented spot which the fancy of the dreamer may appropriate as his own, may create into a realm, peopled, idealised, according to his own standard of excellence, and perfect, like the Island and adjoining Continent of the two De Quinceys, or the Jug force of Hartley Coleridge. It may be a transcript from thoughts to the realities around, a study to be reproduced in verse. But generally it is the outcome of a morbid as well as fertile imagination, and I am much tempted to place this wild escape in search of food or fuel for rhyme in the same category with the Golgotha and Chamber of Horrors, with which Ed. Young surrounded himself when cultivating the dark and the dismal.

CHARLES LAMB, 1775.

Melancholia Mania.

(Folie Circulaire.)

It is a true but tattered shred of old wisdom that there is a skeleton, often many, in every home; but it should be added, that domestic virtue, peace, pleasure so colour and conceal the habitual shame, scandal, spectre, that it is generally unfear’d, unnoticed, unknown. The ancient Egyptians carried their mummified grandfathers to banquets, but the wizened corpses were swathed in gold and gems, and perfumed. Then there are noble sacrifices as well as terrible tragedies in cellars and garrets as well as in palaces and high places. It is but yesterday that Lally de Tollendal, the descendant of the grand chivalrous defender of Louis XVI., rushed from wretchedness in his cellar and shot himself in our streets. Here, too, is a poor clerk, living in an obscure part of London, amid meagre and vulgar surroundings; queer and quakerish in person and aspect, methodical and precise in habits and manners to the extent of always going to work by the same street, hanging his hat upon

the same peg, gazing for the same number of hours upon nearly the same columns of figures, quaint in thought and expression, kind, gentle, and affectionate in nature, who stands forth a poet, a martyr, a hero.

It is probable that the gifts and goodness of Charles Lamb have been over-estimated, hyperbolically described by the crowd of friends, followers, worshippers, almost all of them men of genius, high culture, and discrimination; it is probable that much of the beauty and nobleness which are interwoven with his life and literary efforts are due to the intimate association with these very men, by reflection, or were imparted by intercommunion growing with the growth and embellishment of his peculiar powers; it is affirmed that kindred living in close intimacy grow like each other in face, in features, and in expression; it is certain that such intercourse casts the manners, tastes, opinions in the same mould, and it is probable that Lamb caught some rays of pleasantness and imagination from those in whose intellectual treasures he was constantly sharing, while his own angularities, sinuosities, and sensibilities remained untouched; but certain it is that this lover of all that was pure and perfect—this reveller in unexpected affinities, odd antitheses, out-of-the-way topics, traits, and peculiarities—was, in defiance of his misfortunes, in despite of his errors, almost because of his eccentric imagination, one who appealed and still appeals to those of the finest taste and warmest sympathies. His course may be arranged into stages or chapters. There was first his early, close, and long-continued intimacy with Coleridge. They had been schoolfellows together at Christchurch. They were linked together by similarity of tastes, sentiments, pursuits, and this at a season when both were young and fresh and uninvaded by disease. They were besides connected in their first literary adventure; but it is worthy of note that of all engaged in this voyage of discovery—Lamb, C. Lloyd, Coleridge—the wits were lost or went astray in worthless wool-gathering. The second era consisted in the invasion of insanity. Of its origin little is known except that the sufferer was sensitive, susceptible, and peculiar, occasionally presented strangeness of manner, was subject to involuntary muscular contractions, tremor of lip, stammering, irritability, though his ire, like summer lightning, was brief, bright, innocent; that he branched from a morbid stem; that of the personages who appear in his life-drama his father was an exacting dotard, his mother paraplegic, his sister a paroxysmal, homicidal maniac, and that a stolid brother lived apart and perhaps aloft from this sad family group.* His

* *Charles Lamb. A Memoir.* By Barry Cornwall, 1866.

noble forehead, his glittering eyes, have been alluded to, but his whole aspect was such as to attract notice. He has been further represented as theological, metaphysical, perplexed, despondent. But even where no positive morbidity could be detected, he was ever betraying "out-of-the-way humours and opinions," and confessed that "heads with some diverting twist" were most gratifying to him. It is very strange that Talfourd should have placed his melancholic above his humorous vein, but it is quite possible that both sides of his character were perfectly and equally natural. In a letter to Coleridge, he has written freely, even sportively, of the first attack of madness of which we hear. "I know not what suffering scenes you have gone through at Bristol. My life has been somewhat diversified of late. The six weeks that finished last year and began this, your very humble servant spent very agreeably in a madhouse at Hoxton. I am got somewhat rational now, and don't bite anyone. But mad I was! And many a vagary my imagination played with me, enough to make a volume if all were told. My sonnets I have extended to the number of nine since I saw you, and will some day communicate to you. I am beginning a poem in blank verse, which if I finish I publish. . . . The sonnet I send you has small merit as poetry; but you will be curious to read it when I tell you it was written in my prison-house in one of my lucid intervals.

TO MY SISTER.

If from my lips some angry accents fell,
 Peevish complaint, or harsh reproof unkind,
 'Twas but the error of a sickly mind
 And troubled thoughts, clouding the purer well,
 And waters clear, of Reason; and for me
 Let this my verse the poor atonement be—
 My verse, which thou to praise wert e'er inclined
 Too highly, and with a partial eye to see
 No blemish. Thou to me didst ever show
 Kindest affection; and wouldst oft-times lend
 An ear to the desponding, lovesick lay,
 Weeping my sorrows with me, who repay
 But ill the mighty debt of love I owe,
 Mary, to thee, my sister and my friend.

The next stage consists in the frightful catastrophe, the culmination of his destiny, when, in a sudden outburst of blind fury, his insane sister plunged a carving knife into the bosom of their helpless mother, and killed her instantly; both the victim and the parricide remaining unconscious of the nature of the event. That this sanguinary deed did not overturn Lamb's reason, that he had nerve-force sufficient to resist the horrors of the moment and its long train of consequences, is

marvellous ; but that it exercised a powerful influence over his moral nature, his sympathy, and responsibility was obvious ; he felt that it pronounced his doom, that for him animal pleasure, love—and a filmy love-passage had passed across his life-dream—marriage, home, were all as shadows, and that the care and custody or kindly disposal of his maniac charge was the whole aim and object and duty which remained.

That we never marry our first love is sad. That we never marry any love until we have imbued her with the bloom and beauty of the first, is sadder.

The violet eye, the tinted cheek, the graces of the childish form, must encircle with an aureole of first impressions the mature and matronly sharer in the commonplace, perhaps vapid or vulgar events of ordinary life. The sparkling miniature expands into the full-length ; it is veneered with the more delicate polish of romance. Can it be possible that Dante's Beatrice, Spenser's Rosalind, Petrarch's Laura, Béranger's Lysette—a serving-wench seen through an aureole, or a score of blooming “grisettes” rolled into one—and, lastly, Burns's Mary, are dreams, deliriums, delusions, creations of fancy, that never lived nor loved, that rose up from some remembered image, or were created in the depths of consciousness, stimulated the imagination, elevated the sentiment, and wafted the pure and pious adoration to the very verge of heaven ? Can it be conceived that the supernatural Laura glided shadow-like through the domestic circle, side by side with the earth-born, care-stricken wife of the poet ? Is it credible that the angelic Laura occupied a niche in the temple of Petrarch's genius and heart close to the mother of his children, who was neither wife nor saint nor seraph ? Is it credible that from the same fountain there flowed the gross pollutions—we almost wrote obscenities—of the Jolly Beggars, and the pure and prayer-like invocations to Mary in heaven ? It is noteworthy that the delusions of insane monks ever led to union with the Virgin, while those of insane nuns depicted espousals of the Bride of the Saviour. We have had female lunatics who, misguided by no special teaching nor prescribed ecstasies or reveries, claimed in sacrilegious idea, even in concupiscence, to be united in marriage with the Lamb.

Then came in Lamb's career a long interval of quiet, almost happy enjoyment, during which his spirit gave forth the sweet and elegant utterances of “Elia,” during which his humble ambitions were gratified after his own fashion, during which his fame and fortune spread greatly in breadth and depth, if not in elevation, and during which he collected around him in his Hogarth room, and library of first and rare editions, albeit

garrets, the grandest groups of authors, thinkers, poets, philosophers that ever met in converse, or yielded their fealty in friendship as well as in admiration to a fellow-worker (Godwin, Hazlitt, Wordsworth, Coleridge). It is not to the credit of biographers, it shakes our trust in the fidelity of such portraits, when the wrinkles, the scars, the ugliness of the countenance are omitted, as when the habits of intemperance contracted by Lamb at this time, or earlier, are euphemized or omitted; except where the anxiety displayed by his sister on seeing him mix even a second glass during an animated discussion may be alluded to.

This is the veiled skeleton, the gilded mummy. It reminds us of draped or coloured statuary, of those caricature photographs where the mitred, perhaps the glory-crowned head of a saint is connected with the rude and vulgar trunk and habiliments of a commonplace mortal. It was perhaps natural, even excusable, that a craving for stimulants should arise, that relief and oblivion should be sought from the blight and burden that ever oppressed; nay, excitement or intoxication may have been but the analogue or substitute of that moral poison which lurked within his veins, but the fact should have been told. It is sad to think that Lamb's latter days were not of the calm and pleasant sort described by his friend. A great tenderness, and delicacy, or friendly sensitiveness, has kept back from the account of Lamb's history much which concerned the horrid spectre which attended him all through his life. We are led to believe that in time that great and dreadful trouble had been softened for him, and had as it were faded out, and that the evening of his days had been calm and tranquil. This at least would be the impression on reading the account of his closing days at Edmonton. But it is said, and it is vouched for by good authority, that not long before he died he and his sister had been placed at Enfield in a house called Bay Cottage with a woman named Redford, who was accustomed to take charge of deranged persons. It is said that both required restraint, and that the woman of the place treated them cruelly, often locking up brother and sister together in a closet during some of their fits. There are those who recollect having seen Mary Lamb at a window tearing up a feather bed, and scattering the feathers in the air. Fortunately, friends found out the pitiable state of things, and Charles was removed in time to Edmonton, where he could die in peace. For this last scene of all, which has been presented by only one authority, has been substituted the picture of a quiet, turf-clad grave in Islington Churchyard, visited daily for eleven long years by a pensive sister, who ultimately rested beside the precious dust.

Individuals have been haunted for years with the dread of impending derangement; the phantom being so near and so real that it mingled with and darkened every joy and hope, passed into their dreams, ultimately converting the apprehension into a reality. The substance followed the shadow, the dread became the cause of the disease. But not only must Lamb have had a keen sense of the instability of his own tenure of sanity, but there brooded over him the hideous chimæra of his sister's periodic frenzy and violence, she sharing with him a forecast of Bethlem. His letters show that either as an anticipation or a retrospect her illness and suffering were ever vividly present. His whole conduct, his domestic arrangements, his simple financial provisions, were regulated by the scale of her mental tranquillity, by her seclusion in an asylum, by her temporary return and resumption of household duties. So precarious was her condition, so minute the foresight and precautions against her repeated attacks, that whenever he accompanied her to the country or elsewhere, a strait waistcoat formed part of the contents of his portmanteau. That the unfortunate patient herself had some premonitions of an approaching paroxysm, that these intimations consisted of depression and melancholy rather than agitation, and that she voluntarily adopted the course advised by wise and humane friends, may be inferred from the circumstance that the poet and his charge were not sorrowful and weeping but calm on their way to the asylum in which the latter found rest and refuge so often. That, staggering under all such anxieties and difficulties, with a dark and lowering future, with few of the pleasurable supports or solaces by which men usually divert or dilute the cares and the cankers which oppress them, he should have extracted the precious from the baser metal, the picturesque from the sordid, the ungainly, the awkward, the romantic from the commonplace; that he should have imparted gentleness and joy, and even mirth, to all who listened to him flowing in a pure, continuous stream through the contorted and poisoned, though not polluted channels of his invention, except during a spasmodic pang following his mother's murder, when he burned his MSS., and forswore composition and books, is one of those triumphs which genius alone can accomplish. But let us analyse his springs of character more closely. He did possess solaces of a lofty kind in religious feeling, in the perception of the beautiful and the true, and in the calls of a great and glorious duty.

NATHANIEL LEE, 1657.

Mania—(Dipsomania?).

This unfortunate but celebrated dramatist invited premature decay and death, it may be, by the fire and fury of his temperament, by the malign and morbid influence of constitutional tendencies, and assuredly by participation in the loose and licentious manners and habits prevalent and popular beyond as well as in his profession. Yet he spent his early years in the healthy quiet of a parsonage; he was a Westminster boy, and completed his education at Trinity College, Cambridge. At this stage, however, on the beaten and orthodox highway trodden by our senators, Solons, and upper ten thousand, he deviated from the accustomed route, and after the invariable apprenticeship of play-going and play-writing, he appeared upon the stage. Here, like others of higher genius and pretensions of the same order, he proved a lamentable almost a ludicrous failure, and turned from the attempt to represent imaginary characters drawn by others to what proved the more genial and successful task of drawing and highly colouring characters which might be and were represented by others. He composed "Sophonisba, or Hannibal's Overthrow;" "Nero;" "Gloriana, or the Court of Augustus Cæsar;" "Alexander;" "Mithridates;" "Theodosius;" "Cæsar Borgia;" "Lucius Junius Brutus;" "Constantine;" "Œdipus;" "Duke of Guise;" "Massacre of Paris;" "Princess of Cleves;" all of which possessed a certain amount of merit, which did not, however, save them from oblivion. Certain of his tragedies were the offspring of his lusty youth, certain of his maturer years, if he ever reached such; some were written when he was the companion and compotator of the wits and men of fashion who haunt the green-room or the tavern, and partake intensely of the inspiration of slashed doublets and gin twist, while others were the product of long and painful and repeated seclusion in the cells of Bedlam. It was his fate to present his works to the pit and the public in an age of platitudes, of coldness, stiffness, starchedness; of critics who measured lines and prosed as to the unities rather than dug out the golden ores of genius; who were divided into cliques and clans, and actuated by jealousies, antipathies, and petty ambitions, of which the present generation can form no conception. They were doubtless gratified in dooming and denouncing the plays of poor Lee, but he secured not merely the approbation of Addison, who commends his genius highly, observing "that none of our English poets had a happier turn for tragedy,

although his natural fire and unbridled impetuosity hurried him beyond all bounds of probability, and sometimes were quite out of nature ;” but Dryden couches a eulogy in poetry :—

Such praise is yours ; while you the passions move,
That 'tis no longer feigned, 'tis real love,
Where nature triumphs over wretched art ;
We only warm the head, but you the heart.
Always you warm ! and if the rising year,
As in hot regions, bring the sun too near,
'Tis but to make your fragrant spices blow,
Which in our colder climates will not grow.

These praises chiefly refer to the tragedy of “Alexander,” which is the only one of the long series which has obtained a permanent place in our modern theatre. It is scarcely conceivable but that an author whose thoughts flowed for nearly his whole lifetime through channels of rhythmical and poetic expression, who rarely descended from his tragic stilts, and seems to have been as familiar with the histrionic art and excitement in his closet as on the boards, and who must have made the highest and purest models of dramatic literature his study and science, could have avoided the composition of beautiful and attractive passages. Many of these may be discovered in his works surrounded or overlaid by baser and grosser concomitants ; but one example may suffice :—

There's heaven still in thy voice ; but that's a sign
Virtue's departing, for thy better angel
Still makes the woman's tongue his rising ground,
Wags there awhile, and takes his flight for ever.

But it must be confessed that in few of the rejected adventurers in the drama are to be found so many objectionable lines and epithets as in Lee, and that in none of the class of writers to which these observations apply are there so many proofs—symptoms they may be styled—of the malady under which they laboured. These indications consist, mainly, in the repulsive subjects selected, in the sensational, sanguinary, or melodramatic manner in which they are treated, and above all in the wild, extravagant, exaggerated, and absurd dialogue adopted. Lee appears either to have been constantly mad, or to have been subject to recurrent insanity which necessitated repeated seclusion, and to have retained a certain amount of the taint and excitement of his alienation even when at liberty. The “Massacre of Paris” and the “Princess of Cleves” have been adduced even by his biographers in illustration of this permanent perversion of the imagination.

What would our present playgoers say to the following stage direction ?—

“The scene draws, and discovers a heaven of blood, two suns, spirits in battle, arrows shot to and fro in the air, cries of yielding persons, &c.: cries of ‘Carthage is fallen,’ &c. ;” or such manifestations of hatred and defiance:—

Were I in heaven, and saw him scorched in flames,
I would not spit my indignation down,
Lest I should cool his tongue.

Or :—

Now by your wrongs, that turn my heart to steel,
Well could I curse away a winter's night,
Though standing naked on a mountain's top,
And think it but a minute spent in sport.

These quotations must not be regarded as isolated passages; similar apostrophes recur in every page, and form legitimate characteristics of the style of the author, especially towards the close of his career. Although Lee does not appear to have even coquetted with comedy, nor is there evidence that he indulged in satire or farce, yet grim jokes have lingered about the gloomy abodes of his frenzied life that go to show he was not incapable of either. It is recounted that when in Bedlam he wittily replied to a coxcomb scribbler, who had the cruelty to jeer him with his misfortune, by observing that it was an easy thing to write like a madman, “No; it is not an easy thing to write like a madman, but it is very easy to write like a fool.” In the same place, but upon another occasion when writing one of his tragedies, his candle, granted by some extraordinary extension or breach of asylum discipline, went out, and provoked by the obscuration of the feeble light from without by the passing clouds, he is reported to have shouted, in folly or in frolic, “Jupiter, snuff the moon.” Of the cause or circumstances of his death no precise information has been preserved except that he perished at the early age of twenty-four “in a night ramble” in the streets of London.*

CHARLES LLOYD.

(Circa 1780.)

Melancholia (Paroxysmal).

As withered flower leaves have been found enshrined in amber, as the fame of annotators has depended chiefly upon the works which they criticised, and as the faithfulness and

* *The Companion to the Play-House.* By David Erskine Baker: 1764; Cibber's *Lives of the Poets*; Retrospective Review, vol. iii. p. 240: 1821.

friendship of Boswell have been preserved by his gossip on the grander qualities of Johnson, so the name, and fame, and misfortunes of the poet Charles Lloyd are confined exclusively to the sympathetic writings of a celebrated contemporary. His name is not to be found in Biographical Dictionaries; his works do not form part of our libraries; and except where allusions have dropped from the lips and pen of Coleridge and Lamb, the very existence of C. L. as a man of genius, and as the intimate friend and fellow-labourer of two of the most celebrated men of the past generation would be unknown. About 1795 the publication of a volume of poems was projected by this triumvirate, buoyant with inspiration and hope and the energies of youth, which was to contain contributions from each; but I have not seen the work, and introduce the circumstance to show the high appreciation of the powers of C. L. by his associates. The first intimation of Lloyd's mental infirmity appears in the following passage in a letter from Lamb to Coleridge:—"Poor dear L.! I had a letter from him yesterday; his state of mind is truly alarming. He has, by his own confession, kept a letter of mine unopened three weeks, afraid, he says, to open it, lest I should speak upbraidingly to him; and yet this very letter of mine was in answer to one wherein he informed me that an alarming illness had alone prevented him from writing." Statements nearly to the same effect are scattered through the letters of the same author, and there is reason to believe that the malady thus faintly shadowed forth ultimately amounted to derangement requiring confinement, but of the precise progress or issue I am not entitled to speak more confidently than by citing the following pregnant note in the "Jovial Memorials" of Lamb. "Poor Charles Lloyd! These apprehensions were sadly realised. Delusions of the most melancholy kind thickened over his latter days, yet left his admirable intellect free for the finest processes of severe reasoning. At a time when, like Cowper, he believed himself the especial subject of Divine wrath, he could bear his part in the most subtle disquisition on questions of religion, morals, and poetry, with the nicest accuracy of perception and the most exemplary candour; and, after an argument of hours, revert, with a faint smile, to his own despair!"

From another source I have learned that while suffering under profound dejection C. L. was induced, contrary to his inclinations and convictions, to accompany a friend to the theatre. At first he was moody and melancholy; then his attention was arrested; then he followed the plot and movement of the drama, yielded himself up to enjoy the humour of the

piece, laughed heartily and joyously, and returned home cured and convalescent. The signal power, and generally the beneficence of mimetic impersonation over those of nervous, especially of excitable and marked nervous temperament, is now generally admitted. In ancient times in a Grecian city, it is narrated, that so exquisitely had insanity been represented on the stage that, impelled by the principle of imitation, the inhabitants, or many of them, exhibited similar symptoms in the streets. The tendency in actors, of which Mrs. Siddons is the most illustrious and best authenticated example, to subdue their own emotions, characteristics, even their personality, and to become so absorbed in and identified with the character which they represent, that they cannot for long periods emancipate themselves from assumed passions and emotions, is well known. Such a phenomenon finds a counterpart in the experience of Talma, who, labouring under such permanent delusions as that the pit of the theatre was crowded with skeletons, was able so to concentrate his attention upon his part that he lost all consciousness of everything real or imaginary, except the feelings or fancies which he was called upon to embody. About the beginning of the century Esquirol sanctioned the performance of a play before his patients. The drama hinged upon the unjust dethronement of a sovereign by his subjects. Notwithstanding the proximity of the French Revolution, and the influence which its principles must have still exercised over the prejudices and instincts of the audience, the lunatics, roused by the injustice which they had witnessed, rushed upon the stage in order to defend or restore the injured monarch. Though this experiment failed at Charenton, it succeeded subsequently at Copenhagen; and for the last forty years farces, vaudevilles, even more pretentious comedies and melodramas, have been regularly enacted by the inmates, sane or insane, of asylums in Scotland, England, America, &c. It is probable that the initiative was suggested by some psychological theory, or, what is still more likely, by the wish to supply amusement; but in the present day the drama has assumed a deserved place as one of the most important agents in moral treatment.

LUCRETIVS,

Born in the second year of 171st Olympiad, died aged 44.

Mania.

The analysis of the psychical health of all the thinkers who have adopted the atomic theory from Epicurus to Tyndall would be ripe with interest. The examination would present

various modifications of the original or germinal theory, and occasionally chasms which would create difficulties, if not insurmountable obstacles, to progress. The most conspicuous and perplexing of these would consist in the occasional madness of Lucretius, the greatest of the ancient expositors of the hypothesis. It is not a little startling that the great leaders of the scepticism current in the present day, Lucretius and Comte, should both have been lunatics. It would be as illogical to hold these men responsible when sane for what they uttered when insane, as it would be to identify the incoherent fancies of Goethe and Schiller when drunk with the outpourings of their genius when sober, but it cannot be regarded as unreasonable that an inquirer should prefer the convictions of a mind which had never been disturbed or dethroned to those proceeding from an ill-balanced intellect that, at times, had altogether lost its balance. For setting aside all hypercritical definitions of lucid intervals, there must generally exist an uncertainty as to the precise amount of sanity or insanity which may influence the mind at a given time. Lucretius was subject to paroxysmal mania, and the perplexity arising from what may have been the precise value and trustworthiness of his utterances may be gathered from the following explanations and excuses by Bayle. This authority asserts that a philter had been given to him by his wife, which turned his brain, and it is possible that he may have written poetry while under the influence of the drug, as Tasso certainly did while in a state of alienation, but the safer course is to believe that he had lucid intervals during which he composed his celebrated poem "De Rerum Natura." This philosophical treatise has been described as a contradiction of himself and his own opinions, and, in so far as, while inculcating a high standard of morality, he denies boldly the intervention of Divine Providence, and yet acknowledges a *something* which overthrows human grandeur, this criticism may be accepted as just. He was a physicist apparently vacillating between the doctrines of immortality and annihilation; and swayed, perhaps, by some temporary cause towards the latter, or in vindication of his honest consistency, he committed suicide.

JAMES GATES PERCIVAL, 1795, Connecticut, United States.

Genius, Eccentricity, Melancholia.

It is said that Dr. Haslam, while under examination as an expert, made the startling announcement that he had never known a perfectly sane mind save one. Presumably he had in view

the creative mind, the supreme intelligence, the Almighty centre and source of all thought, feeling, sentiment and spiritual power; and that his proposition was preparatory for certain qualifications and explanations of the conduct of the inferior being, whose manifestations he had been called upon to analyse. Without pursuing the theory of this most practical physician in the direction he intended or indeed further in any direction, it may be perfectly legitimate to hold that to err is human, and that in every human mind there exist so many defects, deformities, disproportions, so much weakness and waywardness, as, although not amounting to alienation, nosologically considered, places it at a great distance from a high or even a rigid standard of mental health. It is perfectly allowable to advocate this opinion, which must not be confounded with the hypothesis that idiocy and insanity are merely degrees in the development of reason or some other mental power; and to believe that the overturn of reason is a specific neurose. But passing from this consideration, it is remarkable that so many individuals of genius and intellect should have been detected under the necroscopic microscope of posthumous memoirs to have cherished in concealment absurd peculiarities, peccadilloes under the exterior garb of wisdom and learning; and it is still more connected with our present purpose to point to the vast number of individuals of ordinary capacity, in the different ranks of society and culture, who inhabit a border land between soundness and unsoundness of mind, who hover between moral health and disease, who occupy a position from which they may be cast down by the slightest disturbance or distress, or the inherent insecurity which may be revealed by circumstances of the most commonplace nature, and which would leave the more robust or callous character untouched and unruffled. In this class must be placed Percival. He displayed great versatility of talent, but was destitute of consistency of purpose; he mastered all sciences and subjects, but achieved nothing; he accomplished paradoxical wonders, and deceived himself and even others into the conviction that he was transcending nature; the companion of poets and philosophers, he must often have been regarded as an eccentric, and seemed ever to have been tottering on the verge of an abyss, into which his failures or fortunes might precipitate him.

Diffident, of extreme sensitiveness and sensibility, he continued from his entrance into school to the end of his career a solitary in crowds, or, at all events, a stranger to all but a chosen few. Pride may have contributed to this shyness, for although the son of a medical practitioner, and consequently in

a respectable rank as society was then constituted, he cherished longings after a more distinguished descent, and claimed or imagined that he might have shared 'all the blood of all the Howards,' or, at least, might have boasted of heraldic blazon of some good old English stock. This appears to be a common and is a natural infirmity of the transatlantic mind, whether noble or ignoble. Precocious at school, and the dux of every class, he preferred familiarity with his father's library to the slow and dull drudgery of rudimentary studies. His devotion to books became a passion, the disposal of his precious companions was to him of greater importance than that of his other goods and chattels, and more of a bibliophile than a biblomaniac he realised the fiction of a recent novel,* in which an old and perhaps crazy book-vendor endures want and misery, and risks pauperism, rather than part with his literary treasures. In several features Percival resembled Cowper. There were the same timidity and retiring habits, the same admiration of beauty in external nature of the pure and simple in character among his neighbours, and the same marvellous fertility, the same abhorrence of fun, coarseness, and frivolity in production, and inferentially it is suspected the same constitutional tendency or puberty. But they were widely separated by the outpourings of inspiration, for while there is much that is genuinely didactic in Percival's writings, they remind us more of the productions of Keats and Shelley than of the "Task" or "TableTalk." He was a poet at fourteen, and it is probable that he carried with him to Yale College not merely his dreamlife, but his shy and secluded habits; for while it is mentioned that a tragedy was found among his exercises, it is added that he defended himself by satires against some form of persecution which has not been specified. It would appear that he obtained distinction in his curriculum in mathematics, oratory, and almost in every department of scholastic training, although still regarded and perhaps twitted as an odd girlish hermit. After the close of his public education and throughout life, his most marked traits were the enthusiastic pursuit of knowledge, especially in natural science, and his inexhaustible powers of laborious research. Whether we trace his career as a tutor; a physician; in succession a surgeon in the army and navy; botanist, and as such superintendent of a public garden; geologist; contributor to literary periodicals; translator; lexicographer; or in the various other pursuits or speculations in which he engaged and generally failed, we observe the same ardent spirit and unwearied perseverance. It is probable that in the intervals which separated his multifarious pursuits he fed upon his own consciousness or lived within himself, actually

* *Saul Weir.* Cheveley Novels.

inhabiting however then, or when not engaged in field operations, his library, which is described as large, dismal, and dusty, for which however he essayed to provide a more appropriate home by his testament. The aspect of this lugubrious dwelling betrays the poverty of the possessor, who, although ever engrossed in public schemes and undertakings, sometimes upon a gigantic scale and patronised by Government, seems always to have been ill or unrewarded, and often impecunious. As an illustration of his ideas of vastness, toil, and completeness, it may be mentioned that the Legislature of Connecticut, anxious to obtain a geological survey of the State rapidly executed, employed Percival, who proceeded somewhat in the following manner:—"Those who have seen a Virginia fence can have a tolerably clear idea of his plan. For in the manner that such a fence traverses a field, he proposed to traverse the State; with this difference, however, that whereas a Virginia fence does not return and take the other angles, Percival's plan did. In fact, beginning at a corner of the State, he was to trace over its entire expanse a double Virginia fence, of which the following array of x's may convey some faint idea:—

x x x x x x x x x x"

An operation which, very naturally rendered him unpopular with landlords and cultivators. In the next place, his specimens of soil, strata, &c., would have filled a small museum. In the third place, his desire to secure fullness and accuracy seduced him into incessant enlargement of his report, so that he disappointed his employers after three prolonged respites. For ten long years this student remained silent, and, so far as publication went, unproductive, and it has been presumed that during this period he was saving money in order to repay a loan which had been contracted in order to prevent his library falling into the hands of the public auctioneer. There may be an anachronism as to the time or manner of his hoarding, but there is no error as to the nobleness or success of his efforts. During one of his long excursions, which extended to 6,000 miles, when exploring the lead mines of Wisconsin, he encountered native tribes, and is affirmed to have acquired a familiarity with their difficult and monosyllabic dialect. His predilection for the study of the structure of language, and his facility in becoming acquainted with various tongues, even to the extent of composing elegant verses in them, is otherwise manifested by his being entrusted with editing "Webster's Dictionary," the "Latin Lexicon," with the translation of Malte Brum, and by his acquisition, at a very early age, of German, when he produced an exposition of the languages of the globe, and by his ultimately becoming an adept in Sanskrit and Slavonic. It is piteous that this really learned man should at times have been insufficiently nourished ;

that in 1832, perhaps a season of affluence, his income should not have exceeded £65. It is equally lamentable that some of his rarest gifts and finest qualities should have been disfigured or obscured by indications of extravagance and peculiarity which cannot be distinguished from disease. Thus, his intense love of children became almost a laughable passion. His exquisite sense of melody, even of music, of which he knew not a note, but of which he had formed a large national collection, or rather which he recorded by a hieroglyphical system of notation of his own, led to the following extraordinary exhibition: "To the surprise of all Percival offered to join our singing club, and even to sing, although he had not mingled in society for years. At the appointed time he retired to a corner of the room; he had never looked half so weird-like; that noble Shakespearian head of his, the sharply cut, spiritual features, his eyes so full of the wild fire of genius, the then curling locks, all gave him the appearance of a minstrel come down from another age. We had already quieted the room for the expected song. Standing near him, I soon knew by the motion of his lips that he was singing. But no one heard him, for I myself could distinguish only the soft breathing of a melody of his that was familiar to me" (page 42); and lastly he presented astounding alternations of indomitable perseverance which enabled him to compose forty pages in three days, and of absorption in self, or inspired trance in which he lost all conception of time, and poured forth his verses uninfluenced by the passage of day and night, or by the number or nature of the stanzas which were flowing, or rather rushing from his pen. It would be irreverent to associate his religious opinions with such moods of mind, but that they were of that vague and metaphysical character which might be expected from one so constituted shall be shown by the quotation of his own words, "Philosophy, religion, and poetry, sit enthroned as a spiritual trinity in the shrine of our highest nature. The perfect vision of all-embracing truth, the vital feeling of all-blessing good, and the living conception of all-gracing beauty, they form united the divinity of pure reason." None of his poems, even the most pretentious, such as "Pormetheus," "The Suicide," "The Wreck," nor his sweet lyrics, betray any trace of eroticism or ill-regulated fancy; even his posthumous poems, selected perhaps, by his executors, are free from all blemish. But all are pictorial, pensive, and thus reflect the temperament or moral tendencies of their author. Nor need this gloomy colouring be wondered at when his incessant disappointments, irregular and homeless mode of life and melancholy diathesis are considered; nay, we might be justified in looking for a darker and more

despairing hue of thought, when the veil which covered his inner life has been somewhat raised, and when it is discovered that this highly cultivated and gifted man was, throughout his whole life, a prey to "deep brooding melancholy," that he looked upon all around through a gloomy and distempered medium; that his very activity was, perhaps, resorted to in order to exorcise the demon, to dissipate the shadows which were settling down on his spirit. This despondency has been supposed to originate in an unfortunate attachment or rejected addresses: but he has contradicted this supposition, and has left the world under the impression that if he cherished a secret passion it was, as in the case of so many of those included in this series, for an ideal object, "an undying one," who continued to live in his heart, while it throbbed its last. Of feeble nervous frame, he is said to have died of general decay.*

EDGAR ALLAN POE, 1811.

Moral Insanity.

E. A. Poe was the child of actors, who both died in his infancy, leaving him nothing except great personal attractions and a high-strung nervous system. The plague spot of eccentricity was developed in one of his proximate kin. A childless millionaire, attracted by the destitution, desertion, and perhaps the extreme beauty of the orphan, adopted and educated him; first for four years in England, where his character was that of an indolent, but clever, impulsive, irregular, and eccentric boy, blossoming, it is said, into a scholar; his next ordeal—for all his steps were downward—was in the University of Charlottesville, where he was the most distinguished of its alumni, but where his profligacy in intemperance, licentiousness, gambling, so far exceeded that of his debased companions that he was expelled for dissoluteness. Soured and enraged by the temporary stoppage of his supplies, he emigrated to Europe, with the intention of rushing into the patriotic struggle of the Greeks; but neither his courage nor his sympathy were ever put to the test, and after passing a year as a nomade, of whose wanderings or doings there is no trace or tradition, he re-appears as a drunken debauchee in a riot in St. Petersburg, is saved from punishment by the American Minister, who sends him home,

* The *Poetical Works of James Gates Percival*, with a Biographical Sketch. Boston: Ticknor and Fields, 1866.

where he is again protected and supported by his former benefactor. Through Mr. Allan's instrumentality he becomes a cadet in the Military Academy of West Point, where he was cashiered for neglect of duty and insubordination. Insult to the wife of his friend, which involved criminal ingratitude, was necessarily followed by exile from his former home.

Want and isolation developed abortive literary efforts; he then enlisted as a soldier; is about to be raised from the ranks by the kind liberality of former school associates, but defeats their purpose, and invites more signal disgrace and ruin by vice, folly, and desertion. Again want developed intellectual or imaginative faculties, but on this second occasion more brilliantly and successfully as the gainer of a competitive prize for the best tale or poem, the award being couched in the ambiguous terms "to the first of geniuses who had written legibly." He is appointed editor of the *Southern Literary Messenger*, after having pandered his genius, sold his thought for a noggin of gin, and reduced himself to wretchedness; while standing before the arbiter of this final throw for his future destiny, he is described as thin, pale, sickly, the traits perhaps of dissipation as much as starvation, in a seedy surtout, so buttoned as to conceal the absence of a shirt, and his boots so dilapidated as to reveal that he was stockingless. United in early life with a cousin, marriage, generally a corrective of errors congenial to youth, if these be not the fruits of it, afforded a temporary check to his extravagant indulgence, and paroxysms of long-continued drunkenness, but the neglect of his literary obligations again despoiled him of employment. After a year's disappearance from public, social, and respectable life he becomes again connected with the press, but the same excesses are repeated. He is described by a biographer as possessed by a drunken and unclean devil, actuated by the fury of a wild beast, as distinguishing neither friend nor foe, and the publication of the magazine of which he is editor is suspended during one of these foul and frenzied outbursts. Professional fraud or treachery is the next ingredient entering into his corrupt course. He endeavours to start a rival periodical to supplant that which generosity had entrusted to him, and to secure the subscribers who had supported his patron. During several years there is a sickening alternation between labour and degradation, distempered fancy and unhealthy poetry. Even in the lulls between these tempests he might be seen skulking in the night along the streets of a great city with an expression of anguish and despair, howling curses or defiance, or breathing prayers and invoking the shades of departed friends and joys. But at a crisis when his fame seemed to be established, when pure and

intellectual society was about to hail him as an honoured member, he reeled, a maudlin savage, from the elevation, and sorrow was added to his cup by the death of his gentle-hearted wife, whom he has the credit of having loved. "None are all evil, &c.," and his mother-in-law adhered to his interests and his fortunes in good report and bad report, canvassed for him, bore with the stupor which followed his orgies, and the maniacal rage which marked his resuscitation, and the ingratitude which darkened even his calmer moments. During what must be esteemed a lucid interval, he became connected with the well-known author N. P. Willis in the management of a daily newspaper, deported himself with propriety, proved an able and efficient collaborateur, and is described by his partial chief as of quiet, gentlemanly manners, of great refinement and delicacy in his bearing, and presenting the winning intellectual aspect of that genius which lurked behind wild passions and base propensities. Like all who belong to the same category, when known under favourable auspices he seemed to be formed of "earth's finer porcelain." These attractions nearly effected an alliance with a fair and accomplished lady, but towards whom he acted with such deliberate and incomprehensible baseness as to be all but inexplicable and incredible. A visit to his native State, a fickle reformation, a vow of abstinence from stimulants, the renewal of a boyish attachment, afforded glimmerings of reason, but a casual encounter with former convivial friends and a single draught of the poisonous Lethe set all these amendments at nought, and a night of raving and riotous revel necessitates his removal to a hospital, where in a few hours this involuntary suicide graduated through a whole lifetime, comes to an abrupt end. Was this brutism of flagitiousness the mere husk, the mask, the reptile-cast skin of a noble nature? Were his pensiveness and dejection, his best aspirations and his worst wickedness, a mere diluted Phlegethon of a corrupted genius, or may they be resolvable into the distinct parts of a moral drama, into sadness and badness and madness? An apologist has advocated the theory that because he composed certain exquisite lyrical gems his original spirit was of "purest ray serene." This friendly critic, himself a convivialist, has affirmed that his "exquisite taste was equal to a conscience, that he was pure, &c.;" but we demur, and would as readily concede that all who painted saints were saintly, that all who commemorated sages were wise. There is another solution. Either the fair and fragile infant was born a dipsomaniac, or the childish lips which "lisp'd in numbers" must at the same time have imbibed the stimulants which at once allay and create the appetite for further gratification, which at once excite and

extinguish sensibility and sentiment, which shake the very foundations of human rectitude and responsibility. This is not a tribunal before which the offenders against common sense, common prudence, common propriety can be summoned, or in which the degrees of guilt, the amount of punishment, the means of protection, can be argued; but directing attention to the bold epitome which has been sketched of the blurred, decrepid, bespotted course of a man of high promise and powers, we conceive that we may claim a medical verdict of the presence of periodical derangement.

This outcast, the author of the "Raven," the "Valley of Weir," &c., popularly familiar even in Europe, was of that excitable, unstable, ill-trained, but fascinating disposition which makes his congeners among ourselves, and can be readily conceived as palliating, excusing, even defending his errors to his own purblind moral vision. He would affirm that he suffered pain, agony, remorse, that he loathed the remedy, and that he sought not intoxication, but relief, oblivion. He would protest that he knew the consequences, that suffering, sickness, would follow the momentary delirium of hope and joy, but that his pressing sorrow was too deep for tears, tolerance, sympathy. He would argue that, burdened by care and by duties which he could not spontaneously execute, he is compelled to seek strength, inspiration, intelligence, as well as a solace, in artificial excitement. He would extol sobriety, glorify repentance and regeneration, pompously announce the abjuration of all indulgence, eschew even the opportunities and temptations to indulge after a recent carousal; but his penitence, promises, pledges float away as the thistle-down, and his numbed, half-palsied hand insensibly crushes the stings of the thistle itself. If the visions and revelations of such lunatics be trustworthy, fear, conscience, care are for them unrealities; memory carries them back to scenes and seasons of pleasure, youth, strength; and the future is either a blank or the ill-defined and interminable vistas seen in a dream. Let it be supposed for a moment that such mental states are not fictitious, but become, when our veins run wine, actual factors of our thoughts and acts, become permanent, morbid impulses; such a moral enigma as E. A. Poe may be understood—not unless.

His poetry is arabesque, often grotesque, and suggests rather a shudder than a sentiment. It has been compared to the productions of the Rev. R. S. Hawker, the romantic, pre-Ritualistic, and saintly vicar of Morwenstow, but, we think, to the disparagement of the priest-author of "Pompeii" (Newdegate Prize), "Poetical First Buds," "Amora," &c. &c.

HENRY SCOTT RIDDELL, 1798.

Religious Melancholia.

Shepherds in mountainous countries are invested with a superstitious picturesqueness suggested, it may be, by the solitudes in which they dwell, or by their supposed familiarity with wonderful natural phenomena and with supernatural beings, with the fays, fairies, wraiths, witches who haunt "the untrodden ways," or, still more likely, by their guardianship of what has become a type of innocence and religious feeling in all Christian lands; which is denied to the husbandman, though of higher powers and pretensions of the plains. When the keeper of the flocks in a wild region became a consecrated shepherd in Israel, and was entrusted with the care and cure of souls, it may be conceived that the reverence and awe of those around were intensified. The object of this memoir took such a step, the connection between the one vocation and the other being formed by the transition stage of dreaming and castle-building, in other words, of poetic inspiration on the hill-side. He was the descendant of a race of shepherds who fed their flocks in that pastoral and romantic region which inspired the genius of Leyden and which may be well named the land of Scott, who, in that weird ride from Branxholm to the grave of Michael Scott, has signalised almost the very spot where Riddell spent his life:—

Soon in his saddle sate he fast,
And soon the steep descent he past,
Soon crossed the sounding barbian.
And soon the Teviot side he ran.
Eastward the wooded path he rode,
Green hazels o'er his basnet nod;
He passed the peel of Goldilaird
And crossed old Bartlewick's roaring strand.*

But this wild and wooded glen echoed in other days to the tramp of more formidable moss-troopers than William of Deloraine, bound upon a more fatal tryst than even his, for it is believed that at Teviot Head were executed the notorious border bandit Johnnie Armstrong with his seven sons, when the father

Danced a spiny and sang a song
Aneath the Gallow Tree.

They sleep under the green sward close to the village church,

* Scott's *Lay of the Last Minstrel*.

where our poet ministered for thirty-five years. On these hills, amid the burns and braes and birken-shaws by which they are beautified, Riddell spent his boyhood as a herd laddie, with so vivid a fancy and so retentive a memory that he gathered up from every one he met vast stores of legends, ballads, even modern songs. His acquisitions in these forms probably determined his adaptation of the lyric for almost all compositions. His early education was of the scantiest, and seems to have been confined to short periods spent in parochial schools during the winter months, prosecuted in defiance of snow, and storm, and swollen streams, and to the instructions of a person employed by his father to teach the whole family in the same studious season. His intelligence, however, speedily led to his promotion to the rank of shepherd-in-chief, and to his being entrusted with a hirsell, or a large flock of cattle, which it was his duty to conduct into remote and secluded pastures. In the lonely glens of Buccleuch his mind "became more tinged with thoughts and feelings of a romantic cast," and then visions and his fancies burst forth in verse. He assures us that at first the outpourings of his spirit were confined to his own bosom, that they served as an occupation of gratification alternating with the repeated perusal of such books as were accessible in such a wilderness, and with the construction of pieces of mechanism with the rude tools which he possessed, using his knee as his desk; he there recorded local events in rhyme, but his hidden and hoarded talent was accidentally revealed by the wind blowing his bonnet, which formed his only portfolio, from his head, and scattering its contents far and wide. His poems thus distributed became the prey of unworthy critics, although his only ambition had been that they should be lauded and lilted by humble maidens of his own degree. His laborious upward course may be traced in his craving for knowledge, for books, and when every other kind of literature was lacking, in his frequenting the cottages of those, even of old women, who had possessed opportunities of reading and could recall the impressions they had received. He then attended a school in an obscure town, where, besides miscellaneous information, he became acquainted with the classical languages. He now became an author, or the editor of a periodical so humble in its pretensions and circulation that its name is scarcely known, and that its readers must have been confined to a rural district. So humble was the position, and so narrow must have been the pecuniary resources of his relatives, that it is difficult to understand through whose aid or by what instrumentality he entered the University of Edinburgh: but certain it is that he attended

there during a complete literary philosophical course, that his success in all his classes was considerable, that he obtained from a prosaic professor marked commendation for a translation of an Ode of Anacreon, that about the same time his "Songs of the Ark" appeared in *Blackwood*, and that Christopher North conferred upon him the grand distinction of introducing his song of "In the Glen all is still" into the "Noctes Ambrosianæ." In estimating the financial position of Riddell I was fully acquainted with the penury and difficulties which, though they obstructed the theological career of students in Scotland some sixty years ago, may have served as a part of their training and as the basis of that laborious, sturdy, self-denying energy which made so many of them able defenders of the faith as well as philosophers; nor had I forgotten that Riddell had endeavoured to explain the means by which he gratified his thirst for knowledge and his ambition by confessing that he had hoarded every penny of his wages, and that to these savings was added a small sum left by his father; but even this avowal reveals the hardships to which he must have been subjected. We next find him engaged in the higher branches of knowledge, at St. Andrews, subsequently as an extemporised schoolmaster, ultimately returning to his beloved haunts in Teviotdale. During all these changes he never ceased to engage in the composition of poetry, especially of songs, which, published and unpublished, must have amounted to many hundreds. The best known of these are "Scotland yet," "Our ain Folk," "I have Lo'ed Thee only," but many others are still popular in the cottages and shielings of his native valley, while others have by a natural process of selection ascended into ladies' bowers and festive halls. But his muse was not "cribbed and confined" to mere lyrics, but embraced ballads, epics, translations, diverging even into Christian political economy. Before settling at Caerlanrig he had passed successfully through the prescribed examinations and become a probationer of the Church of Scotland, which may be translated into a presbyter before consecration. It has been told that his reputation, passing beyond the secluded nook where he nestled, attracted the attention of the Duke of Buccleuch, who, seeing the appropriateness that a shepherd should deal with the spiritual wants of the pastoral population of the district, appointed him the clergyman of the chapel in an adjoining village. In the commencement of his incumbency he had to walk nine miles to the scene of his official duties, and it was frequently his lot to preach in a very uncomfortable condition, when indeed the wet would be pouring from his arms on the Bible before him, and oozing over his

shoes when the foot was stirred on the pulpit floor. But ultimately the Duke of Buccleuch provided him with a house near the station, where he afterwards resided. The tale is so sweet and poetical, and in such keeping with the kindness and munificence of the noble patron, that we hope it may be true, but its hero says nothing to this effect, but in his autobiography signifies that not long after his migration to Teviot Head "the preacher who officiated in the preaching station died, and the people connected with it wished me to become his successor, which, after some difficulties on their part had been surmounted, I became." Here, surrounded by a simple-minded, attached, admiring congregation, he lived, loved, and died. A man of considerable intelligence, of great natural simplicity of character, of that culture which fancy, under the guidance of a systematic education, secures, he was enthusiastically attached to his home, his family, the scenery upon which his eye had rested since imagination was awakened; he was fond of society, and with congenial spirits in his own humble dwelling, as in the adjoining market town, his conversation overflowed with mirth, music, ballads, and wild traditions. Occasionally he visited a kindred *littérateur* in the border towns, even in Edinburgh, but his time was almost wholly occupied between his professional studies, his poetic inspirations, the cultivation of his garden, the tending of a few sheep pastured on the adjoining slopes, or in wandering through the "daisy dells," the tangled woodland, or the burnside of his own Teviot. He was scarcely known to the external world, except on the appearance of a new song or volume, thus, "world forgetting, by that world forgot." It is highly probable that his solitary habits, the dreamy susceptibilities of his earlier years, the unvarying sameness of his vocations, the feeling that he had become the partner of a lady somewhat his superior in tone and habits, and lastly those excitements to which nervous natures are especially liable, impaired his mental strength and solidity, but certain it is that in 1841 he became the victim of despondency so profound and so complicated with suicidal tendencies, that retirement to an asylum became absolutely necessary. The origin of his malady was, however, traced to the circulation of a report, calculated, if not to impair the usefulness of his ministrations, to wound his feelings at the most sensitive point. The injury inflicted produced at first great distress of mind, which may fairly be regarded as the natural result of such a crisis in a mind so constituted; but what was at first merely anxiety and dejection, gradually passed into panic and perplexity, until the suggestions of his naturally emotional and imaginative disposition, escaping from the control of reason, gradually assumed the form of substantive delu-

sions or of delusive fears. Either as an effect of treatment, or the natural subsidence of his agitation, greater equanimity and self-possession were observed, greater confidence and reliance were extended to the superintendent, and the misconceptions by which he had been enslaved were either doubted or exercised less dominion over his imagination; but although the phantom conspiracies, &c., by which he had been haunted had faded in distinctness, the incontrollable apprehension and anxiety remained in full force. He was terror-stricken, but could not identify nor describe the objects of his fear.

He was designedly placed as a member of a group consisting of two clergymen, two *littérateurs* by profession, a medical man, and several other individuals of education and cultivated tastes, in the hope that the sympathies, similarity of pursuit and habits of thought, might engage his attention, and prove a source at once of distraction and consolation; but at no period of his residence did he enter into intimate relations with his companions, or do more than tolerate the intercourse of genuine kindness, of which he was the object. This isolation proceeded rather from shyness, and a suspicion that his country bearing and local reputation scarcely entitled him to a defined position in such a community. To the medical superintendent he was as open and candid as his quiet and unobtrusive nature permitted. He served as a confessor for his sorrows and secret cogitations, and these revelations were sometimes of a most startling but interesting character. His principal theme was naturally the misery and suffering by which he was bowed down; but he likewise dwelt upon his inability to escape from these tyrannical feelings, upon the utter change which appeared to have taken place in not only his own family and social relations, but even in the external face of the world, and upon a suspicion either that his original identity had been subverted, or that a quality of consciousness had been established by the processes of disease. He spoke much of two parallel currents of thought which served to run constantly through his mind, one of these consisting of suggestions of despondency and despair, the other of bright imaginations, which shaped themselves into couplets or verses of some description. He appeared to be convinced that many of these trains of ideas, especially the composition of poetry, originated outside or beyond himself; that neither the thoughts, nor their expression, nor the rhymes, were acts of volition, or could have been prevented or altered had he so wished. He repeated specimens of these productions, and they were precisely of the same character as those which were afterwards recognised as his. They consisted of lyrics, border ballads, hymns, and excited wonder and

admiration both by their beauty, sweetness, and by their origin in a mind so darkened and distressed, and amid such exquisite pain and terror. It is very probable that the atmosphere in which he lived—in other words, the conversations which he heard, the books and manuscripts and occupations of his associates—might have insensibly suggested recurrence to his former mental pursuits and sources of happiness, for at this time every effort was made to induce the patients to engage in literary work, and so successful was the attempt that now were produced many of those poems, essays, “quips and cranks and wanton wiles,” which in after years appeared in the pages of the *New Moon*, and were at that distant time regarded as marvellous illustrations of the possibility of eliciting light from darkness—

Darkness shows us worlds of light
We never saw by day ;

and of employing in 'a natural manner the healthy faculties of morbid minds.

Mr. Riddell contributed largely to its pages, and many of his poems can still be pointed out; but it would be rash to determine which of these had been composed during his residence in the asylum, although some of them undoubtedly were. One of these (November, 1844) beginning “The harp so loved awakes no more,” bears internal evidence of mental gloom, and may be claimed as belonging to this period, although it was sent to the editor long subsequently to Mr. Riddell’s discharge. In addition to the medical and protective means of treatment adopted, and in addition to daily and prolonged conferences and confidences which were resorted to in order to enable the patient to lay bare the whole extent of his perplexity and distress, and to enable the physician to afford whatever consolation or support could be derived from presenting truthful and healthy impressions to his mind, and from exposing indirectly the errors into which he had fallen, repeated attempts were made to rouse him from the state of stolidity or passivity into which he fell, after the disappearance of specific delusions, by reference to his family, former position, usefulness, by reading aloud portions of his own published poetry and border minstrelsy, &c., by inducing him to take exercise in the surrounding country, to join in appropriate amusements, and to stimulate the attention and powers of mind generally by the infliction of slight degrees of pain, by means of application of blisters, &c. At one time a marked approach to convalescence could be observed: he could be engaged in general conversation, and spoke clearly and consecutively; he appeared to have denuded himself of all delu-

sions, and described his mind as prostrate before a sense of confusion and inexplicability, and a vague apprehension of coming evil. There is reason to believe that the original delusions never afterwards excited any influence over his mind, and that his look and expression of pain, difficulty, and dread proceeded from his inability to comprehend the new position into which he had been thrown, and to struggle against the misfortunes which his consciousness of his impairment of power seemed to portend. His friends imagining that his removal to new scenes, and the consequent necessity for self-exertion and self-control, might call forth what faculties remained, he returned home. The restoration was not, however, complete. There are indeed grounds for believing that he again sunk into profound melancholy, during which, although living in silence and seclusion, and apart from his family, he felt constrained by the mastery of a spirit which seemed at variance to his own, or external to his consciousness, to engage in composition, and actually produced numerous verses of various degrees of excellence, a metrical translation of the Psalms, &c. In a letter still existing, he describes the little closet in which he was accustomed to immure himself, surrounded knee-deep with MSS. ; and where he conceived he was compelled to undergo a sort of penance or doom, and from which he could not escape. The friendship thus commenced with his physician—on his part in the struggle to obtain comfort and support, and on that of the physician in sympathy and in the sincere desire to afford relief—never ceased nor waned. After he had entirely regained his former health and serenity, he commenced a correspondence with his physician by a wish to obtain his opinion as to doubts which then disturbed him as to the propriety of resuming his ministerial, and especially his pulpit, duties. This was followed by placing at his disposal various unpublished poems, written, as it was understood, both while in the asylum, immediately after his return to Caerlanrig, and at other times, for insertion in the periodical which had commenced, and was conducted by patients, and which still continues.

The following ballad is supposed to have been written during the author's residence in the asylum :—

Though spring should flee lightly and summer come 'soon,
 We weary a wee for the braid autumn moon,
 For as she blinks bonnie o'er meadow and glen
 She sees her ain sel' in the steel o' our men,
 And to the auld tune o' a Michaelmas moon
 In capers right cantie the steeds we bestride
 And boun' to the foray on our Border side.

It's sweet when the blackbird sings in the green shaw
 To cheer his proud mate in her new-bigget ha';
 And sweet when the summer o'er mountain and lee
 Has spread a' its blooms to the breeze and the bee;
 But o' a' things aboon the braid autumn moon,
 Can heeze up our spirits in power and in pride
 When boun' to the foray on our Border side.

Our maids at the mirrors their lang tresses trim,
 And their een gie us light, though the stars should be dim;
 But there's naught on the earth, and there's naught in the sky,
 The lack o' the braid autumn moon can supply;
 But later or sooner comes back our ain moon,
 And then weel we ken wha the chargers will ride,
 And boun' to the foray on our Border side.

Right proud is the king o' his sceptre and crown,
 Begirt wi' the goud and the diamonds aroun',
 Yet feelings as proud the brave bosom will feel
 When donn'd is the sword and the helmet o' steel,
 And wi' the first roon o' a Michaelmas moon,
 We swing to the saddle whate'er may betide,
 And boun' to the foray on our Border side.

The dewdrops may freeze into rime on the lee,
 Where glinted the gowans sae gay in their glee;
 But if our ain moonbeams gleam over them there,
 The rime shall be welcome as rubies are rare;
 And then the horse shoon shall be bright in the moon:
 When basking at hame they nae langer shall bide,
 But boun' to the foray on our Border side.

The courtier may frisk in the light o' the lamp,
 While the Borderer sweeps o'er the sward and the swamp;
 But he ne'er can be hail'd wi' sick glee by his dame,
 As when our braw lads o' the Border come hame;
 When to the auld tune o' a Michaelmas moon,
 The spoil o' the proud and subdu'd we divide
 To dowrie the daughters o' our Border side.

The maidens are merry, and matrons are free,
 The sang has its sweet, and the tass has its glee,
 And the hut and the ha', and the hill and the glen,
 A charm that the city and sea dinna ken;
 And spurtle and spoon keep our bauld hearts aboon,
 When bein by the ingle frae winter we hide,
 And bask in the bounty o' our Border side.

Mr. Riddell, from conscientious scruples, never resumed his clerical duties, even after his mental darkness had entirely passed away.

(The above passages have been extracted from the memoir of H. S. Riddell, by James Brydon, M.D., Hawick, 1871, with the permission of the editor, to which they were contributed by the writer of this article, and have been introduced here as affording an approximation to what is generally inaccessible, a psychological picture of an imaginative mind when under palpable or certificated insanity.)

JEAN JACQUES ROUSSEAU, 1712.

Genius—Moral Insanity.

There are two events in the history of Jean Jacques Rousseau which, to those who do not accept eccentricity as the germ or gauge of genius, appear ludicrous and lackadaisical. He is represented when a boy of seven as constantly associated with his father—a conceited literary watchmaker of Geneva—engaged in reading sentimental novels, probably of the French school, and when the store of these was exhausted as having recourse to historical and biographical works, which had been transmitted from clerical ancestors, who had fled in revolt from persecutions in the adjoining country. Plutarch's Lives were to them as romances. That this initiatory education, and especially the influence or rather the contamination of his reserved, sensitive, punctilious parent, produced upon a boy of inferior, sickly, and disordered constitution its natural effects, is proved by the fact that these recluses fostered their grief for the deceased mother of the family, engaged in paroxysms of weeping, and converted what might have been a natural into a morbid or maudlin sorrow. The second event adverted to occurred towards the close of his career. It appears that when living in Paris he occupied his time as follows: In imitation of what he believed to be the simplicity of a philosopher, he rose at five a.m., copied music till seven, during breakfast arranged plants previously collected, again copied music for several hours, dined, visited a coffee house, and then wandered into the country to botanise, apparelled in a fashion which must have astounded the Parisians even of those days. He wore a long upper coat somewhat like the modern Ulster, necessitated by the existence of some disease; in the very hottest weather he carried his hat under his arm, in order to court, for health's sake, the direct action of the sun upon his head; he returned home laden with the spoils of the field, and retired to bed almost at sundown. But we must trace the upward growth of the regenerator of mankind. With a deadened sense of objective relations, which, when unimpaired, is the key-stone of sanity, but with the redeeming traits that he clung tenaciously to his home, to his attachment to those who had once inhabited it even to their sayings and songs, this ugly, puny, prematurely self-conscious urchin is sent to school. There he manifests some generosity to his companions, but is generally pugnacious, addicted to vicious and sensual habits, and is upon

the whole a clever, contumacious, disreputable, and indifferent scholar. What is rather a rare attribute of boyhood he cherished, revenge and retaliation. After prolonged family councils as to whether he should be a watchmaker, a lawyer, or a clergyman, and after his inclinations had led him alternately to seek for fame and fortune in oratory, drama, or in the pomp and pageantry of glorious war, he is apprenticed to an attorney, from whose employment he is discharged for stupidity and incompetency. He next appears under the tuition of a coarse and tyrannical engraver, whose locks he picked, whose property he stole, and from whose business he ran away. His must have been a nomadic family, as his elder brother had long before eloped and been irretrievably lost in the Far West, and his father, insulted by some local notable, left Geneva in anger and disgust.

As if to illustrate the real results of his celebrated hypotheses that there are no natural virtues or tendencies to virtue, that our prevailing principles and practice are the artificial products of civilisation, it would appear, from the evidence of a somewhat favourable commentator, that his connection with his master of the Burin developed the following crop of repulsive qualities: "slyness, greediness, slovenliness, untruthfulness, dishonesty, rascality, and the whole ragged regiment of the more squalid vices." In after life these different forms of baseness were recollected, but not repented of. Now an exile from his native city, he wandered through the adjoining country, admiring the beauties, partaking of the frugal fare of the peasants, inhabiting the picturesque hovels on the shores of Lake Lemán; then sojourned with a priest, to whom he simulates contrition, whose wine and good cheer may have contributed to these religious impressions; next he establishes himself in the household of Madame de Warens, who is described as frail and generous, who either seduces or is seduced by her *protégé*. He is next found in Zurin, where he, a stern Calvinist, professes Catholicism, is admitted into a monastery, enters upon his novitiate, and after a dexterous controversy with the monks is baptized. But asceticism did not suit the constitution of this lascivious voluptuary, and he is dismissed, or dismisses himself, in possession of twenty francs. Was all this sham, or self-deception, or delusion? A wanderer, living upon one sou per day, and starving in his visions, repeatedly a lacquey, in one situation endeavouring to criminate a poor girl with a theft which he himself had committed, in another attempting to make love to his master's daughter. At this epoch his musical, sensuous, and sensual proclivities become opportunely developed or intensified, and he returns to his former paramour, Madame de Warens. These propensities must

have induced a state of positive eroto-mania, and he lived in relations with syrens, sylphs, and imaginary beings, the creations of his own fancy, wherever he went. Like others affected with this form of mental disease, he preferred intercourse with the phantoms he conjured up to that with real personages, a preference strengthened doubtless by the obstacles presented in his diseased loathsomeness to have passages with his fellow-creatures. Among his imaginings were two females differing in aspects and attractions, with both of whom he appears to have been enamoured, and with whom he held colloquies. For a long period it is quite obvious he lived in an ideal world, endowing every object therein with beauty and splendour, and incapable of discovering anything fair or pleasure-giving in his actual surroundings. It is worthy of note that this man at other times indulged in day-dreams of his marriage with royal dames, of his attainment of rank, riches, celebrity, and that, when penniless and a dependant, he could not write his romances except on the very finest gilt-edged paper, nor dry the ink with any powder except azure or sparkling silver, nor tie up the packets except with delicate blue riband. His connection with a family so characterised by degrading dissoluteness, and such apparent unconsciousness of the real nature of their conduct, discloses a new symptom in the pathological condition of this unhealthy adventurer, for he affirms that on approaching the members of this morbid group or objects of fascination, "his whole organisation seemed to be dissolved in convulsions, palpitations, trembling, fainting." Admitting that this is partly hyperbolical, partly hypochondriacal, the victim must have resembled the bird under the fabulous gaze of the snake. Repeatedly we hear of a life of vagabondage which led him into many of the countries in the south of Europe, which was diversified by a number of occupations varying from that of a domestic drudge to a connection with a diplomatist. With his protectress Madame de Warens he appears to have lived for ten years, and with other patrons, whom if he did not regard with lust he treated with ingratitude, for different periods. Apparently in virtue of introductions from Madame de Warens, he secures a connection with the French envoy to Venice when in Lyons, whom he accompanies to Italy, exercising in succession the capacities of preceptor, musician, and private secretary. According to one account he comes into contact at a village inn, according to another in his lodging in Paris, with a certain Thérèse, vile, vulgar, ignorant, who, however, became his lifelong companion, and the mother of his children. During his whole course this incarnation of perverse originality, turpitude, treachery, had ardently and persistently cultivated letters, made himself acquainted, superficially perhaps, with history, philosophy, and

mathematics, and had gained prizes for dissertations on the influence of the arts and sciences, on morality, &c., and we are not therefore surprised to find that, under the influence of a lady of somewhat doubtful repute, but who to him proved a steadfast friend, he was made known to D'Alembert, Diderot, and Condillac, who employed him to write articles for the *Encyclopædia*. There flowed subsequently from his pen compositions in music which proved failures, an opera which was successful, lectures on music, "*Julie, ou la Nouvelle Héloïse*," the "*Contrat Social*," "*Emile*," "*Letters on the Writings of Montaigne*," "*Discourse upon the Origin of Inequality among Men*," &c. These works are characterised by brilliant imagination, by new theories of education, society, political organisation, but are all paradoxical, extravagant, and subversive of the convictions of wise and prudent and pure men. It must not be conceived that during these prolific labours the student became more rational and respectable, or less restless. He is the guest, or tutor, in châteaux, where his amorous predilections are re-awakened; he rouses the prejudices or passions of a district, and escapes or returns into an island, where he assumes the American costume; he becomes the pet or friend of our aristocratic sceptic Joseph Hume, with whom he quarrels, and whose bounties he rejects either because the philosopher declined to sit at table with the poor scullion Thérèse, or because his supposed criticism was alleged to be unfair or ungenerous. Contemporaneously with these events, we hear of remorse, retributive acts, despondency, and suicide. Whether his death was self-inflicted or not cannot be ascertained; but it is probable that the decay of nature or disease closed his career, as illness or infirmity is said to have led to his retreat to the country domain of an affluent protector, where he inhabited a cottage, herbarised as long as strength permitted, and then thanking his benefactors, asking forgiveness from his wife and from God, and while gazing wistfully on the fair face of that nature he loved so much, his troubled spirit passed into rest and silence.

It might be difficult to determine whether this innovator, this pretended discoverer of new worlds of thought, was most mad as a profligate or a philosopher. His "*Confessions*," which did not appear till years after his death, and which constitute the basis of all his fame or infamy in this part of Europe, afford ample testimony of mental unsoundness, and especially of that moral obliquity which impels an individual to regard as right all that others regard as wrong in both phases. It is probable that these glimpses of his inner life may have been coloured by that habitual, it may be said that constitutional, untruthfulness interwoven with almost all his acts; portions of them may have been intended as poetical romances, and are in this respect

admirable; but while they disclose an ill-balanced, perverted, and morbid mind, it is in his general history, even in the epitome given here, when viewed constructively, that the real origin of his otherwise inexplicable conduct may be traced. It is unnecessary to insist upon the gloom and depression to which he was subject, his separation and isolation from his fellow men, to whom he seems to have attached himself solely for selfish or sensual purposes, nor to the self-destruction of which he was accused, in order to establish this fact, for his biographers admit, nay some of them obtrude as a sensational feature, his attacks of *eroto-mania*, which not merely set all the law and limits of propriety at defiance, but created wild and multitudinous delusions, typical alike of his brutal natural propensities, and of the phase of alienation which these had perhaps engendered. But exaggerated notions have been recorded when he was not under such impulses; thus he suspected that the plaudits awarded to his opera were intended to expose and enhance his offence as a plagiarist. Again, when about to leave England, he attributed the adverse wind to the designs of M. Choiseul to detain him in England, and likewise thereupon he addressed the English bumpkins in a long harangue in French. Another manifestation of his mental degeneration was the conspicuous, the total absence of the perception of truth, rectitude, honesty, in short of the sense of right and wrong, which pervaded not merely his familiar intercourse with society but his highest mental efforts. It may be that many of his wild and grotesque theories were proposed and elaborately marked out in support, in justification, of his own delirium and delinquencies. It may even be that his whole being was, from disease, a deceit, an hypocrisy, that his excited fancy and unholy convictions caused him to look upon all men, all things, all feelings, all opinions, all creeds, all conventionalities, through a distorted and false medium, and that he thought and acted accordingly. But in either case derangement must have been present. Yet this lunatic was one of the motors, one of the factors of the French Revolution, one of the unseen agencies of that volcano which, although at present silent, has covered the fair soil of France with irreclaimable lava and blood. Nay more, he has been classed with St. Paul, Hildebrand, and Luther, who saved the society of Western Europe from dissolution, culminating in the Reformation; as having with Voltaire and Diderot regenerated France, creating a new Bethlehem, from which might issue another social and political birth. It is not because this callous idealist sent his children to the workhouse to be educated that I hold him to be morally mad, but because he lacked that natural affection, that instinctive love of offspring, which would have compelled him,

may coerced him, to shelter and cherish these unfortunate outcasts in his home and in his heart of hearts. It is not because he arrogated to man an original equality in faculties, and feelings, as well as political rights—that all mental qualities and acquisitions are the product of teaching and training, or that he extolled the primitive man, who in our woods a noble savage ran, as the perfect man, the model which should be imitated, and towards the realization of which all efforts should be directed—that I hold him to be morally mad, but because he would have reduced society to its primæval disorganisation in order to attain this end, and positively preferred the foul, brutal, sanguinary wild man of the woods to the finest examples of virtue and ability with which he occasionally associated; and because he practically emulated the passions, the falsehood, and the recklessness of these specimens of fully-developed human nature. It is not because of his monstrous criminality and unconscientiousness alone that I hold him to be morally mad, but because he failed and appears to have been incompetent to perceive, or regret, or repair the nature or the consequences of his own misdoings. He seems to have been somewhat conscious of the imperfection or hebetude of his conscience, as, according to Mad. D'Epinay, when she endeavoured to console him when labouring under remorse, by attributing his errors to the head rather than to the heart, he said, “Know that I was born, and am, of a perverse nature, that it gives me pain to do good, and that I hate my benefactors.” *

RICHARD SAVAGE, 1698.

Moral Insanity.

It is inexplicable that the cold, immaculate Sam Johnson should have condescended to become the defender of this intellectual Arab. A governor of Canada allowed a wolf to nestle in his bosom; a lord chancellor named, nursed, cherished two leeches; and the great lexicographer must needs have like pets. Alternately he is the panegyrist of his verses, the apologist of his follies; he expends the most turgid phrases and equiposed antitheses; he runs into paradox in the vain attempt to show that, although vicious in conduct, Savage was virtuous, and a friend to virtue, in his writings; and he expends his

* Morley's *Life of Jean Jacques Rousseau*; *Dublin Review*, October 1870; *Westminster Review*, October 1859; *Imperial Biographical Dictionary*.

grandiloquent epithets, and it is to be confessed ethical platitudes, over an expanse of a hundred pages in his "Lives of the Poets," double the space allowed to Milton, and triple or quadruple that which is niggardly meted out to Cowley, Collins, Young. The narrative is sad and unsavoury, unsweetened by the dignity and heroism of tragedy, unrelieved by the humour and heartiness of comedy; the issue is factitious, being the downward career of a grovelling genius; the incidents vulgar—but it contains elements more striking than the most extravagant and romantic fiction. The Nemesis embodies the implacable hatred of a mother towards the fruit of her immorality; the misfortunes, the meanness, the misapplied talents, the degradation of her victim; and the struggle between shame and sin, between fervid imagination and as fervid passions, between the selfishness and the necessities of the infanticide and the parricide. The author of the "Wanderer," and a vast number of pieces deservedly less known as being fulsome petitions to the great and the powerful, even, at last, for a few pence; which in stateliness of march, command of language, especially of invective, in the discrimination and contrast of character, very much resemble the productions of his biographer, was, according to his mother's confession, the illegitimate son of the Countess of Macclesfield by Earl Rivers, but, disgraceful though the narration may be, some doubt is cast upon her veracity, as her object evidently was to procure a divorce from her husband. In this she succeeded, with the additional publicity that the separation was effected by a bill introduced into the House of Peers, instead of the Ecclesiastical Courts. She immediately became the wife of Colonel Brett. That this monster-mother should have disliked and avoided the ever-obtruding memento of her guilt, even although it neither trenched upon or touched her rank, riches, troops of aristocratic friends, may be intelligible, but for years she pursued her prey with unmitigable, unrelenting fury and cunning. Unnamed, disowned, she first consigned him to the charge of a poor woman, on condition that his origin and antecedents should be buried in oblivion and the castaway brought up as her own offspring. She next declared him to be dead, and thus succeeded in defrauding him of a legacy of 1,000*l.* designed by his licentious father in reparation for the obloquy of his birth; thirdly, in order to blot out his name and presence, she entered into a conspiracy to send him to the American plantations, which was, however, fortunately defeated, as such a fate was tantamount to slavery, as may be learned from the issue of the children's crusade, and the disposal of other troublesome children in those days; interment of another kind is next tried, and he is apprenticed to toil, penury, obscurity, and a shoemaker. Like other

irrepressible weeds which seek light and upward growth, Savage, the etiolated abortion, having discovered his mother's secret and herself, picturesquely walked in front of her house, in order to catch a glimpse of his tyrant oppressor, and having entered the lobby was seized, accused of assault and intent to murder, and would have been tried for this imaginary offence, had it not been for the interposition of some one in power; and when condemned to death for a homicide which he actually committed, his sleepless antagonist attempted to step between him and the mercy of the Crown. She even thwarted his attempts to gain a miserable subsistence by his writings for the stage. Upon two occasions her shame and antipathy were turned to his advantage. Lord Tyrconnel, a relative, in order to prevent the impending exposure in a series of lampoons of his connection with the poet, took him into what really was gilded servitude; and on the publication of his poem of the 'Bastard,' disgraceful in its intent as well as in its effect, his mother tacitly confessed its seathing truth, and expelled herself from the society of Bath. The training of this starveling was of the most meagre and indigestible kind. He figures first as a pupil in a small grammar school at St. Alban's, where precocious beings of the same temperament as he scribbled rhymes, and there he attained some distinction. In this position he seems to have been supported by a stranger. In the next stage his spasmodic studies are pursued during a nightly attendance at the theatres for years, are crowned by the usual imitation of the pieces he sees in an "Author to Let," &c., &c., and in his own *début* as an actor, which was sadly unsuccessful; and his ultimate education consisted in observing men and manners, in the society afforded by taverns, temporary patrons, and the substrata of the literary world, where his teachers, needy or bankrupt in purse though wealthy in wit, displayed much of their ingenuity in evading creditors, masquerading bailies in execution in the liveries of servants, and in writing squibs in taprooms, in order to discharge their reckoning—the fruits of his discrimination or dissection being preserved on scraps of paper picked up on the streets or elsewhere, necessity thus, as it has often done before, stimulating genius. So elementary, so superficial and shallow were his acquirements, that even his eulogist unwittingly confesses his surprise that a man of no education, no reading, should in his satires afford so many indications of classical acquirements, wise discernment, and dignified diction. His works are undoubtedly redolent of hollands and tobacco, and of the coarse, if not corrupted atmosphere which then prevailed in places of public entertainment; but they afford sufficient evidence of force of character, of astute penetration into the motives of those with whom he came into contact, and of a facility in

diction, which if not musical is earnest and striking. His lines remind us of Dryden without his polish; in caustic invective, of Churchill without his scrupulousness; but in the skilled adulation of the powerful he exceeds these and all his compeers. Of the beautiful in external nature he had no conception, indeed he never appears to have journeyed beyond the sound of Bow bells, except when bribed to subject himself to an economical and probationary exclusion in Swansea he went half-way. He has left no trace of love or friendship in an exalted sense, and, while lavish of money which was not his own, or was given to save him from misery, or other purposes, there is no indication of his generosity except one. Meeting on the street a wretched woman who had perjured herself in order to convict him of murder, he divided with her his last guinea. Removing from our consideration for a time the redeeming properties of certain of his writings, and while attributing much of his degradation to the cruelty of those upon whom he had a claim, and the mistaken liberality of those upon whom he had none, and likewise to his own passions and gross appetites, it is impossible to reconcile conduct about to be detailed to any other source than Moral Insanity, to that ill-balanced intellect which fails to perceive the rights of society, the obligations imposed by decorum, friendship, self-respect, or the delicate, even the broad distinctions of honour and honesty, nor in fact acknowledges any higher responsibility than what has been called "gallows morality." Now to the proof. There may be some explanation or extenuation of the broil in a brothel, where he killed his antagonist, but there can be none for his pocketing the gold of his patrons, and then caricaturing them without any feeling of shame or disgrace—for begging, borrowing, or receiving the assistance of his associates for one purpose, and then appropriating the means thus obtained to another with no consciousness of dishonesty—for the acceptance of munificent supplies from charity and compassion, which he squanders in prolonged dissipation and licentiousness, treating with animosity such as required the repayment of a loan, with utter obtuseness of the wrongdoing. This supposed perversion of his moral sentiments may also be seen in his lack of gratitude or common-sense in appreciating the home and hospitality afforded by Lord Tyrconnel, and in casting away that protection, the very means of livelihood which he could have no rational expectations to secure elsewhere; except from the vain and extravagant suggestions of imagination, which never failed in his utmost need to inspire new schemes although they rarely provided bread; in his total insensibility or indifference to the comforts, the privileges, the feelings of others; and in traducing and betraying contemporary authors—so speaks even Johnson—and in exposing what had been revealed

in confidence; in his iniquitous and insane profusion while utterly destitute of resources, while he never had a settled residence for three months together, while subsisting at the tables of the affluent, or exchanging jests and attractive discourse for food, wine, and wassail in obscure drinking-dens, where he ran the risk of being publicly cudgelled; and in electing nakedness, homelessness, passing the nights in the streets, in cellars, on bulk-heads, or with the vilest associates among the ashes of a glass-house, rather than sacrifice his orgies, engage in manly toil, or accept assistance according to the dictates of others; in his selfishness, self-conceit, meanness, which led to the outrageous misapplication of funds supplied by benefactors whom he lampooned for the liquidation of debts fraudulently incurred, and to his taking refuge in a jail, where, though kindly treated, he was associated with criminals, where after a confinement of six months he was seized with languor, dejection, and fever, and died unable to recall some thought with which his mind had been burdened; and in actions unjustifiable and unreasonable to all but himself, and so insensate and morbid that they must have owed their origin to that original lack or subsequent loss of conscientiousness, that imperfect if not extinct perception of right and wrong which constitutes a form of mental derangement.

FREIDRICH SCHILLER, 1759.

Genius—Dipsomania.

The author of "The Robbers," "Don Carlos," "Fiesco," "History of the Thirty Years' War," "Wallenstein," "The Maid of Orleans," the Shakespeare of Germany, was the son of a surgeon, who became an officer, a forest administrator in the service of the Duke of Wurtemberg. The poet was tall, slender, square about the shoulders, evidently shambling in gait, but gentle, stately, and impressive in presence. Of kindly affectionate nature, he was changeable, restless, susceptible, unworldly, imaginative, excitable, ambitious—

The craving for something afar,
The desire of a moth for a star.

We find him a boy seated on the extremity of a branch of a large tree in the forest, gazing at the lightning as it blazed from cloud to cloud during a thunderstorm, admiring its beauty, seeking to know what it was and whence it came, altogether ignorant of danger. We find that, a lifetime afterwards, "as his

bodily feelings were those of languor and exhaustion, he adopted in impatience of such mean impediments the pernicious expedient of stimulants, which yield a momentary strength, only to waste our remaining fund of it more speedily and surely . . . Often the neighbours used to hear him earnestly declaiming in the silence of the night; and whoever had an opportunity of watching him on such occasions, a thing very easy to be done from the heights lying opposite his little garden house on the other side of the dell, might see him now speaking aloud and walking swiftly to and fro in his chamber, then suddenly throwing himself down into his chair and writing, and drinking the while, and sometimes more than once, from the glass standing near him."

Between these two distant periods we trace him as a docile, intelligent boy, undergoing culture, designed and disposed to enter the Church; secondly, compelled by his prince to give up this choice for soldiery and surgery; thirdly, deserting his regiment, in which he was medical officer, and seeking emancipation from royal and regimental yoke by going to Mannheim to see and to superintend the representation of his play of "The Robbers," the effect of which drama was said to have been to turn the heads of youths, and to turn them into amateur bandits and outcasts, which caused it to be interdicted in Germany and denounced in Britain; fourthly, restless or nomadic, he passes from Mannheim to Dresden, from Dresden to Weimar, from Weimar to Jena, from Jena, &c., forming friendships, however, at every footstep, and leaving the fragrance, or rather the radiance of elevated sentiments, unselfish purposes, and intense ideality wherever he went; fifthly, spending his whole time in composition of the most varied kind, but always within the domain of imagination or romantic history—in the conversation or correspondence of the most gifted spirits of his time—in attending, regulating, reforming the drama and its representation; sixthly, in forming many attachments, two of love which might have eventuated in marriage, before he actually married, and numberless friendships, none of which seem to have closed in estrangement or feud; seventhly, living more entirely in fancy, feeling, and transcendental thought than any other man. He says of himself: "My mind is drawn different ways, I fall headlong out of my ideal world if a holed stocking remind me of the real world." He, with other poets, lived in a self-created, ideal world. This is beautiful, or barren, or blasted, as fancy dictates. It is peopled with fair, fantastic, or hideous beings, in keeping with the creator's temper, temperament, or digestion. It may be the arena of glorious or ignoble deeds, the stage on which are represented principles and moral promptings, which elevate men into gods; it may be filled with the homes and

hamlets of virtuous poverty, or with the palaces of luxury, hereditary distinction, pretentious ambition. Is all this inspiration the gossamer or the frost-work of a transcendental, inventive faculty? Are the visions of the seer supersensuous, involuntary, and impassioned? Does the heart bound and beat, do the museles thrill and burn with fervid heat, is the eye in a fine frenzy rolling, is the mind unconscious of its own genius, are the musical words oracular? and is the speaker for a brief time a sibyl, a prophet, a pythoness? It would be vain-glorious to assert that any one save the inspired passed within the magic circle, or witnessed the evolution of such enchantments. It would be profane to attribute certain of the sublimities of Byron to gin and water, or the unexciting ethics and landscapes of Thomson to his preparatory dose of Epsom salts. But we suspect that the process of composition is more mechanical, more dependent upon surroundings, than what is romantically conceived. Were the mind of this class sustained in constant or frequent excitement and exultation, as their fond admirers and imitators imagine it to be, were the brain inflamed and urged, as it is supposed to be, during profound thinking or feeling, why do we not find the whole race or many of them the victims of General Paralysis.

As his faculties and his prospects expanded, discontent arose. His medical project, like many which he formed, never came to any issue. The primary disposition of his nature urged him to perpetual toil. Love made Schiller crazy, as it does all gods and men. During the whole of his life he seems to have laboured under consumption, aggravated by angina pectoris, under an attack of which he died, uttering as his last words, "Calmer and calmer, many things are growing plain and clear to me." *

CHRISTOPHER SMART, 1722.

Melancholia.

It would be trite to say that the noblest thoughts lose during translation by dilution, by the total inability of the translator to identify himself with the thoughts, feelings, and fancies of the original, even if he could thoroughly appreciate and understand them. But even when such obstacles are overcome, and when the copyist has followed his model with exact fidelity, it

* Carlyle's "Life of Schiller."

is impossible to determine whether the whole force or delicacy of his brush, his burin, or his brain has been put forth, whether a second impression is ever so fresh and sharp and bright as a first, and whether a translation or a copy be not invariably looked upon as inevitably and naturally inferior in merit to what is, or professes to be, the direct and original offspring of the author. It may be that Christopher Smart, having taken and claimed rank little higher than that of a translator, has been tacitly assigned his place among these valuable contributors to our knowledge of antique models; and that the depreciatory criticisms bestowed upon his English Horace may be justifiable, as his name is not to be found in the Golden Legend of this class of poets in Dr. Hannay's article on the subject in the "Quarterly Review"; yet it must not be forgotten that he was thanked by Pope for his translation of the "Ode to St. Cecilia," and was instigated to perform a similar office for the Essay on Criticism; that he was the friend of Garrick and Sam Johnson, the latter of whom wrote an account of his literary career. As another proof of high gifts or attainments, it should be mentioned that he gained the Seatonian Prize, Cambridge, in five successive years, and that the subjects selected—the Eternity, the Immensity, the Omniscience, the Power, and the Goodness of the Supreme Being, would indicate an aspiring, if not a lofty genius. His history, although doubtless embracing much of the romance and the tragedy comprehended in each chapter of life, is simple, short, and leads by a natural descent to that dark depth into which so many kindred spirits have fallen.

Educated at a public school he distinguished himself by his classical acquirements in the University, became a Fellow of Pembroke Hall, but closed his connection with the institution by marrying; then arrived the necessity for removal to London, the taxing of his knowledge or imagination for bare support, and his failure in keeping stern poverty from his door. Throughout his whole course there had been a tendency to depression: mortification, disappointment, and debt aggravated this gloom into derangement, and his necessities placed him within the rules of King's Bench, his prison, asylum, and deathbed.

The few materials accessible as to the acts and aspirations and surroundings of men of even transcendent powers and widespread reputation, whose minds have bent or broken under disease, have astonished and hampered me since the commencement of the present inquiry; but the occurrence of such gaps and barrenness is much more conspicuous and lamentable after the last blow has been struck, and a living grave has closed over one who may still for half a century thereafter exercise limited family and social influences over the actors in the world which

he has left. It is true that memory may be a blank, that intelligence may be shattered and shorn, that every sentiment may be tottering to its fall; but to the mental pathologist such wreck and dilapidation may be fraught with knowledge, and the study of the ruins of a Buckland or a Lucretius is as much calculated to inspire awe and solemnity as those of the Coliseum or of Nineveh. Smart, in a mad-house, deprived of pen and paper, indented the following stanzas ("than which devotional poetry has nothing grander even in Milton,") upon the wainscot of his madhouse cell with a key:

SONG OF DAVID.

He sang of God, the mighty Source
Of all things, the stupendous Force
On which all strength depends;
From whose right arm, beneath whose eye
All period, power, and enterprise
Commences, reigns, and ends.
The world, the clustering spheres He made,
The glorious light, the soothing shade,
Dale, campaign, grove, and hill,
The multitudinous abyss,
Where Secrecy remains in bliss,
And Wisdom hides her skill.
"Tell them I AM," Jehovah said
To Moses; whilst earth heard in dread,
And smitten to the heart,
And once above, beneath, around,
All Nature, without voice or sound,
Replied, "O Lord, Thou art!"

The necessities of this penniless poet may be contrasted with the practice now prevailing as marking the change, if not the advance, in medical opinion upon the subject. Fifty years ago writing materials were withheld from the insane upon the principle that the exertion of thinking, correspondence with friends, &c., were exciting and detrimental; now composition in poetry, general literature, art, is encouraged wherever capacity or previous culture offer a soil, as a means of moral treatment, of stimulating recuperation or re-growth. We have seen that Clare was encouraged to write poetry;* many volumes of verses such as the "Pilgrim of Sorrow," "Songs of the Night," &c., have been produced by incarcerated lunatics, and periodicals have for many years issued from the press of Institutions for the Insane, which are mainly devoted to rhyme of various degrees of merit; of these we may cite the "New Moon," which has appeared monthly in the Crichton Institution for the last forty years, of which the 411th number is before me.

* *Notes of a Literary Life.* By M. R. Mitford, p. 196.

JONATHAN SWIFT, 1667.

Genius, Eccentricity—Mania (Structural Disease of Brain).

A tinge of romance mingles with the earlier scenes in the life of one of the most plain-speaking practical men and unsparing satirists of his age. The posthumous child of an English family of good descent, he was, for reasons which are not very obvious, surreptitiously stolen from his home, and for three years concealed by his nurse: mysterious circumstances which created suspicion, and, very absurdly, affiliated him as a child of Sir William Temple, the Minister. At fourteen he was entered as a student in Trinity College, Dublin; was regarded as morose and unpopular by his companions, as devoting himself to history and poetry, to the neglect and contempt of the regular routine of study and discipline, a rebellious course which entailed the inevitable punishment of a refusal of his degree, but was subsequently granted that ignominious concession which secures, although it cannot be said to entitle, the holder to orders. A misconception of the character of this qualification enabled him to enter and obtain his degree of M.A. from Oxford, and to reside there on the bounty of relatives and benefactors. Acting nominally as the tutor and librarian of his connection, Sir W. Temple, he for a long period cultivated and stored his intellect with that knowledge, philosophical and political, grave and gay, which was ultimately utilised in such varied fields of literature, and which gained for him a very wide, if not a universal reputation for wisdom and wit. There, however, it is affirmed, he laid, by a surfeit in eating, the foundation of that taint to his nervous constitution, which ever afterwards poisoned and impaired his system, burdened him with infirmities, soured his temper, dried up his sympathies, and eventually entailed insanity and death. During a temporary convalescence attributed to his native air, the influence of distinguished friends, perhaps of royalty, certainly of vice-royalty, procured him the appointment of a prebendary, which he speedily felt to be an exile, and as speedily deserted, in order to return within the more genial atmosphere of rank, affluence, and refined society. Living long in expectation of his promotion to a canonry in Westminster, which had been undoubtedly promised by the king, and finding that his patron had deceived him, or had regarded

his services as having been sufficiently remunerated, his unstable, or rather his unconscientious, opinions assumed the petty though acrimonious revenge of condemning, caricaturing, and, it must be admitted, calumniating all king's courtiers, and all who aspired to their confidence, or had benefited by their influence. His wrathful feelings were somewhat appeased when he received two rich endowments at the hands of the presiding Lords Lieutenant, and ultimately the deanery of St. Patrick's Cathedral. It cannot of course be supposed that up to this well-advanced stage in the Dean's progress, his sense of the ludicrous and the grotesque, his cravings for fun and frolic, could have been concealed, or have failed to blossom; but it was upon his induction into one of his rich livings that his characteristic burst forth, and he addressed the only one of his parishioners present as "Dearly beloved Roger, the Scripture moveth you and me in sundry places," &c. This layical parson might in those days have exposed himself to a charge of innovation and ritualism, as he had just announced that prayers would be read every Wednesday and Friday. It is highly probable that his youth, jocund manner, and unclerical tendencies prevented his further elevation. It has likewise been conceived that, notwithstanding his acknowledged talents, his intimacy with those who shared those gifts or could appreciate them, the flexibility of his principles, and, above all, a change in his political creed and the partisans with whom he had been formerly associated, presented a more formidable and permanent barrier to preferment. His penetration into the motives of even the Ministers whom he joined, his recklessness as a pamphleteer, his subserviency or adaptation of his versatile powers to objects doubtful if not unworthy of his character, and his hard, haughty, overbearing manners, may have contributed to the doubt which he certainly felt, and to the intentional conversion of his deanery into a place of banishment. Still another obstacle has been adduced to his elevation to the bench. He was accused of being no Christian, and that at a time when orthodoxy was assuredly not in the ascendant; but it was an assertion to which his rashness, coarseness, and speculative tendencies lent much countenance. The assumption of his dignity was attended by great estrangement and coldness, by outbursts of positive violence and vindictiveness on the part of the Chapter; but although these difficulties were gradually softened down, giving way before great astuteness, force of character, and gracious manners, there still remained another source of suspicion and unpopularity, that of immorality. The "Stella" of his verses is held by one set of controversialists to be his wife, by another his mistress. All that has been clearly ascertained of this extraordinary connection is, that she was the

daughter of the steward of his early patron, Sir William Temple, who left her 1,000*l.*; that she joined him in Dublin, but that they never occupied the same house, invariably met in the presence of a third person, that she was young, beautiful, and accomplished, and that subsequent to her death, her name was never mentioned by the survivor without expressions of sorrow.

A marriage between these persons is said to have been performed by the Bishop of Clogher. Lord Orrery has said of this curious story, "there are actions the true motives of which will never be known." Another lady occupied a place in his affections, or, at all events, figures in his poems under the name of Vanessa. Sir Walter Scott treats with scorn and incredulity all statements or insinuations that such connections were other than pure and platonic; but Dr. Johnson seems to have entertained an opposite opinion. There is in the manners, aspect, and attentions of certain individuals, especially if of distinguished talents and position, so much of acceptableness or attractiveness to the female mind, that their looks, their intentions, even their words are misunderstood or misconstrued; and this may have been the case with Swift, as it is asserted that even after he had confined himself to his house, the deanery was daily beset or besieged by crowds of ladies, admirers, who craved interviews, kind words, and, above all, scraps of poetry. Into these MSS. double meanings, and expressions of unchaste, if not positively erotic, meaning found their way. A certain allowance must be made in judging of such coarseness for the colloquial language of the day, and for the habitual unscrupulousness of the writer; but the appearance of these blemishes, and the bold, harsh, denunciatory style of the satirist have tempted certain critics to deny his title to the rank of a genuine poet. That his intellectual powers were of the highest order, that his style was clear, rich, racy, that his powers of invention were unrivalled and felicitous, is all admitted; but the range, and especially the elevation of his fancy and imagination have been questioned, and even his claims to success in the field of fiction have been limited to what was intended as satire in the "*Voyage to Lilliput*," &c. It is assuredly a triumph of genius that what were written with a very different object and with different motives should be read a hundred years afterwards by our school-children as charming novels or fairy tales in a region hitherto untrodden. When in the full zenith of his powers, when actively engaged in the very literary calling in which he had become distinguished—in pamphleteering, which served 150 years ago the same purpose in political warfare, and especially in writing up or reading down a party or a person, that

newspaper leaders and public meetings now do—while in the very act of composing a satire he was, according to our biographer, seized with vertigo or unconsciousness, and never again resumed his pen for the same purpose. This is pathetic and striking, but there is other evidence to show that this *petit mal* had recurred, in conjunction with other nervous symptoms, for many years. He himself traced this significant indication of decay to the childish freak of gluttony in eating a hundred golden pippin apples.

It is not necessary to adopt this example of excess nor the vague report of hereditary tendency as connected with the development of nervous disease, nor is it certain, although the patient repeatedly refers to his potations in his letters, that he was addicted to drinking until he was actually insane, but to one form of excitement he seems throughout life to have been prone, and to have given way to such violent paroxysms of temper that they must have resembled Mania Transitoria. This gave rise to reports of assaults on brother clergymen, and undoubtedly provoked and promoted that degeneration which ended in complete dementia, which is supposed by one writer to have extended over a period of fifty-five years. Such a termination was apprehended by the sufferer himself, and allusions to such a fate are found in his writings, and its shadow has been traced in the frequent fits of despondency to which he was subject. An enthusiastic admirer has contended that his oddities and eccentricities of manner cannot be attributed to nervous peculiarities, and that mental disease in its true sense was never present. I cannot, however, take so favourable a view of the progression of such symptoms as deafness, sleeplessness from slight causes, rheumatic and other attacks, and a tumour of the eye which involved maniacal excitement, pervigilium, increased giddiness and a tottering gait, prolonged periods of dejection, and of inability even to write, estrangement from friends, gradual loss of vision, forgetfulness of the names of particular friends, even of words, and ultimately total silence. Ameliorations and arrestments in the advance of his malady appear to have taken place, for, notwithstanding his impaired memory, he gave dinner parties, and notwithstanding his infirmity in walking he took much exercise as a remedy, and is said to have walked nearly ten miles a day in his room almost to the close of life. While able to take short journeys with friends occurred the painful scene narrated by Dr. Young, when, gazing long and pointing to the blighted and decayed branches of an elm-tree by the road, he said “Like that I shall die at the top.” For years before his death “his understanding was so much impaired and his memory so much failed that he was utterly incapable of

conversation," and "his reason was wholly subverted, and became absolute lunacy;" and it matters little whether his closing hours were passed in the quiet, dreamless slumber of fatuity or in protracted convulsions, he evidently fell a victim to the disease which we have diagnosed.

ROBERT TANNAHILL, 1774.

Suicidal Melancholia.

Tannahill was a handloom silk-weaver in Paisley. He was thin, pale, swart, as might be expected from his earnings of 10s. 6d. a week. He worked in a dark damp shop, somewhat below the level of a narrow dingy street, where a dull yellow light found entrance through small uncleaned windows, and where an oil cruse hung from his loom often helped his vision. Here for twelve hours or more of every day his shuttle sped its weary course, moving however to the music of the poet's words in the very act of composition, answering the voice of other shuttles speeding on a similar errand. Yet to him this dismal, dusty room was filled with the sights and sounds and the fresh smell of glens, and birken shaws, and mountain sides, where the "bonny blooming heather" relieved the grey rock, the grey lichen, the grey leaden sky of his landscape. Here even the joyous seasons made their circuit, and the voices of spring speak in such picture-words as—

Lav'rocks fan the snaw-white clouds,
Siller saughs wi' downy buds,
Adorn the banks sac briery, O;
Round the sylvan fairy nooks,
Feathery breckans fringe the rocks,
'Neath the brae the burnie jouks—

passing softly and sweetly into the "lang simmer day" when "blaeberries" grow and the wild mountain thyme form features of the scene—

Where the deer and the roe
Lightly bounding together
Sport the lang simmer day
On the braes o' Balquhither.

But the rays of fancy brighter than the dim twilight from without lighted up this perfumed fairyland, and the forms of bright and beautiful beings, known only in the heaven and loved only in the heart of poets, glided through the wild flowers

and under the clear blue sky amidst which he dreamed ; but although these fair phantoms were many, his history shows that he knew of only one, and that a slighted and scorned attachment. Sombre and sordid although some of the surroundings were, it is probable that the illusions and imagery which gilded and gladdened and concealed their real repulsiveness formed the happiest scenes and portions of his brief and uneventful career. He evidently derived intense delight from the production of his verses, from the correspondence with unlettered and unknown congenial spirits, from convivial meetings with those who admired or felt with him, ever mourning over the excitement and excess to which such "reunions" sometimes led ; but the deepest and most inexhaustible sources of his happiness consisted in listening to his own words when sung by the lips of others, and in the contemplation of external nature, especially in its woodland aspects, as presented in the Braes o' Gleniffer, Stanley Shaw, and other sequestered spots near his own smoky town. Of one of these emotions he writes that the most grateful of his feelings of the proofs of his popularity was the having his musings interrupted, during a solitary walk, by the voice of a country girl, in an adjoining field, whom he overheard singing by herself

We'll meet beside the dusky glen
On yon burnside.

His passionate admiration of the beauties of the outer world differed widely from that of his prototype and idol, Robert Burns, whom in many things he resembled. The taste of Tannahill was entranced by pictorial beauty, by the forms and colours of what he saw and loved ; while the soul of Burns idealised, moralised, and discovered, and was drawn to a meaning, a life, an embodiment of the Divine in every bud and flower that adorned his path. Like the Ayrshire poet, he enjoyed the privilege and the training of family and home, of a self-conducted education, which, besides culture and refinement, imparted considerable mastery over language both in prose and verse, and created that sensitive and sentimental nature which was at once a strength and a weakness. Burns may be regarded as the type of the peasant-poet, Tannahill as the type of the weaver-poet, but there have been shepherd-poets, blacksmith-poets, &c., in the favoured "land of the mountain and the flood," and in looking over the voluminous biographical notices of poets who were natives of Scotland, our astonishment is excited by the large numbers who have belonged to the artisan or even servile class who were of some pretension, or who still enjoy a posthumous popularity. The elevation of genius gave to Burns a sense of equality with all ranks and manners which rendered him accept-

able alike to the polished and the powerful : but present in Tannahill in a much lesser degree—and of this he was perfectly conscious—this rare quality imparted a shyness and awkwardness and uncertainty of position when in the presence of those whom he regarded as his superiors, which led him to recoil from every upward step and from the promptings of ambition, while it fostered so keen a craving for applause and fame as to become a morbid and fatal gift. Perhaps the narrowness of the circle in which he moved increased this moral infirmity, for, except when unwittingly following in the steps of artisan guilds on the Continent he sought employment among his craft in Lancashire, he never left the place of his nativity, nor added to the humble friends and fellow-labourers in his own walk of life. Everyone has his great man, to whom he clings as a patron, whom he imitates as a model, or worships as a god ; but except for one day, Tannahill's only shrine seems to have been that of a smith who set his songs to music. This great festival in his literary course consisted in a visit from James Hogg, the familiar friend of Scott, Campbell, McNeil, who actually made a pilgrimage from the sheepfolds of Ettrick to pay tribute to the obscure songster who had the good taste to cultivate simplicity and purity in all his compositions, and the modesty to rest content with the acceptance of his minstrelsy by the village maidens of his northern land. This meeting of congenial spirits was prolonged during the night, and by the gloomy and distrustful bard accompanying the cheerful and self-confident shepherd far on his way to Glasgow. Their parting was prophetic, the fare well concealing perhaps a purpose as well as expressing a feeling on the part of Tannahill. He grasped his hand, and with tears in his eyes said "Farewell ! we shall never meet again ! Farewell ! I shall never see you more." Bodily disease may have contributed to this depression, for with the sturdy good sense of his father and the tenderness of his mother he inherited the constitutional taint of consumption of which many of his kindred had died. But the pensiveness which many poetasters feel and many more affect assumed in him the more positive forms of melancholy and suspicion. "He evinced a proneness to imagine that his best friends were disposed to injure him, and a certain jealous fear of his claims to jealousy being impugned." To lack ambition altogether is mental defect and pusillanimity, and Tannahill, although the least presumptive and obtrusive of authors, and although contented with his lowliness and obscurity, and even desiring its continuance, craved the applause of a wider world than his own : that his Doric minstrelsy might be chanted on other burnsides than his own and over a wider area than that comprised in Renfrew, Stirling, Ayr, and Dumfries, where

his songs there were and still are popular. We accordingly find that he was a candidate for the admission of his lays to what was in his time regarded as a temple of fame, Thompson's "Select Melodies of Scotland." He approaches the arbiter of his fate less as a claimant than as a suitor and suppliant by his pleadings, but what was subsequently recognised as the genuine merit of his poems availed nothing, and they were placed amongst "Rejected Addresses." It is said that Keats was "extinguished by an article," and Tannahill's want of success seems to have been the culminating point of his destiny. It must have been that his temperament and original constitution, his toil in an unhealthy atmosphere, his habitual despondency, encouraged it may be by his imagination and the contracted range of his enjoyments, prepared the way for the final catastrophe, but the "fiat" of the publisher was the grand disappointment of his life, relieved and counterbalanced though it was by the wide circulation of an edition of his book. But unsolaced and unsupported by the countenance and kindness of friends and admirers, he manifested such unequivocal signs of alienation, and so keen a sense of the misery he was enduring, that he was confided to his relatives as labouring under unsoundness of mind. His return home was cheered by a gleam of tranquillity, or by the assumption of a calm which he did not feel, and stealing out during the night unperceived, he was next found stark and stiff in a pool—he would have written "linn"—of one of those burns which had doubtless often found a place in his affections and imaginings.

TORQUATO TASSO, 1544.

Erotic Mania—Delusions.

Torquato Tasso has been drawn as a martyr rather than as a madman. He has been depicted as the victim of the petty tyranny, the ancestral pride, even the literary envy of the sovereign to whose court he was attached as a sort of parasite charged with the office and functions which in former times were consigned to bards or harpers, then to jesters and fools, and now to laureates; and whose sister he had dared to laud, to love, even to kiss in the presence of his master. Suffering under such wrongs and jealous persecution, he is more contemptible than as the deluded and drivelling maniac, but the

portrait is probably from the hand of a king-hater. These discrepant hypotheses are fully discussed in able articles in the "Journal of Mental Science," the author of which is inclined to exonerate the sovereign, and to regard his *protégé* as of unsound mind throughout his whole life. Whatever the origin of this shadow in the varied, virtuous, and glorious career of 'Jerusalem Delivered,' all his biographers agree that his infancy was passed under the influences of the soft, genial skies of the orange and myrtle groves, and the emerald sea of Tarento. He was cradled at the side of a pious, pensive mother, articulated when he was six months, and spoke when he was ten months old, understood Latin at six years, and Greek at ten years old; but though the precocious child borrowed much, most of what was bright and beautiful in his own nature, from these first impressions, his father was an ambitious political partisan of princely houses, whose misfortunes and machinations estranged him much from his home, and from bestowing such training and tutelage upon his son as his own education and experience might have afforded, and whose example engrafted, or at least fostered, those restless habits, that craving for the society, the smiles, and the more substantial gifts of great and royal personages, which afterwards characterised him, but which, it must be confessed, was the heritage and ignominious vocation of proud, penniless men in the middle ages. The spirit of persecution under the chronic internecine feelings, if not the feuds, of convulsed Italy involved children as well as their parents; the family of Tasso is broken up, the child is sent to his refugee father at home, where he grew in mental stature, perhaps the spoiled pet of the patrician, the polished, the pious, the refined in the centre of the Christian world—perhaps having his fancy trained and tintured by the paintings, the statuary, perhaps by the historic ruins, even by the very stones by which he was surrounded, but where his practical, if not prosaic father, determined that he should study law. He is first sent to Bergamo, and thence to Padua, where, in place of dying or deadening his imagination over the Pandects, or submitting to the ordinary curriculum, he gave full scope to his perception and craving of the beautiful in nature, art, history, romance—he delivers lectures on heroic poetry, conceives the idea or outline of his great epic, and apparently devotes his whole intellectual power to anæsthetics. A pasquinade imputed to his pen necessitated a voluntary exile from Bologna, and for years he may be traced through Mantua, Modena, Padua, every footstep marking some advance in the path of literary distinction and towards poetic fame, although those roses and laurels and imaginary crowns did not deceive his father or make him swerve from his prediction of poverty, dependence, and

anxiety. Summoned to Ferrara by the Cardinal d'Este to fill some courtly office, his course as a hanger-on, an enthusiast, and a lover began, although to his own convictions the future was crowded with glorious visions of the pomp and pageantry of distinction and success. It is probable that if his admiration and adoration of the fair sister of his nominal patron was anything more serious and sincere than the espousal of a name and a colour in Chivalry as an incentive to courage, or than the Platonic devotion expressed by troubadours to the heroines of their verses, it was but an episode in the grand purposes of his heart and soul. While this friendship, we dare not vulgarise it as a flirtation, merely gave immortality to its object in compositions which placed their author at the head of the living poets of Italy, while his orations secured the ardent and unanimous applause of his fellow-citizens, while he confers repute on an embassy to Paris, to which as an humble subordinate with a threadbare coat he was attached, by saving a brother-poet condemned to death, his liberal but capricious sovereign delighted to honour and enrich him. It is possible that golden opinions, increased emoluments, the acclaim of all entitled to confer praise, and the gentle condescension and confidence of the object of his admiration, who granted private conferences, who listened approvingly, and, as the theme of such poetry and such a poet, delightedly, may have proved formidable, even fatal, to an excitable, dreamy, yet aspiring nature, and have sown or stimulated the germ of that moral upas tree which in part and at times cast a shadow over his future happiness. At all events, these favours of fortune were the last rays of sunshine which for a season gladdened his career. Suspicion, espionage, accusations of heresy and conspiracy dogged his steps, and although for a brief time protected by his idol, Leonora, after a struggle with the desperadoes who carried out the designs of aristocratic intriguers, he was consigned to the cell of a monastery, threatened, cajoled, watched, worried, with the design of producing that madness which had been attributed to him. Liberated or escaping from thralldom, he flies in disguise to his early home; tempted from thence it is affirmed by letters from the faithful Leonora, he returns to Ferrara, but is there, and subsequently in Mantua and Venice, pursued and ostracised by the stigma of insanity. Wandering as a wretched, ragged beggar, selling the baubles which had been the gift of royalty in his palmy days, exposed to the various and bitter fortunes of outcasts, his devious, it may be delirious, steps were again attracted to the vicinity of his patroness, and of what was still more priceless and peerless, his MS. writings, and he is again rejected, reviled, and immured in an hospital with the wildest and most degraded captives, and in

his frightful dungeon his mind is said to have been "petrified," in other words, was overthrown. Even the miseries of this chamber of horrors were aggravated by the death of Leonora, and by the publication of "Jerusalem Delivered" in a mutilated form; but even under these misfortunes he continued to pour forth in lavish luxuriance as profusely as the *improvisatori* of his native land the inspirations of his genius—and it is doubtful whether, when ameliorations were conceded, when he was permitted to associate with his friends, when his cell became a shrine, to which the pilgrims and devotees and worshippers of the divinity of genius resorted, even when he reascended the eminence from which he had been hurled, his lays and lyrics were more beautiful and exquisite. After five years' seclusion, his failing health extorted not compassion, but a semblance of leniency from his gaolers, and he was allowed to gratify his religious feelings by visits to churches and convents, but was still watched and warded; at other times he gazed from the grated windows of his gloomy prisonhouse, where his pallid, calm, statuesque countenance was visible to the crowd in the street, and excited in such strangers that pity and sympathy for which he yearned, but which he was denied. The remonstrances and petitions of the princes and peoples of Italy at length obtained his discharge from confinement, under a sentence, however, of banishment and silence. In one sense his restoration to society came too late: he had to contend not merely with the demons of pride and poverty, but with a sense of deep, irreparable injuries, of disappointed hopes, and visions of a wasted life, and with that placid but deep-seated melancholy which is akin to penitence. It may have been this depressing sentiment of pious gratitude which led him to our Lady of Loretto and other holy spots; but it does not appear to have been dissipated, either by reliance on heavenly aid, by the admiration, adulation, munificence of the wise and wealthy, or by the lovely and health-restoring scenes amid which he moved—not even by the award of that laurel crown which he must have coveted; and he fell on sleep in the quiet monastery of Saint Onofrio, while the streets of Rome were animated by the preparation for his coronation in the capital, and the wreaths were fresh and green which were to have graced the ceremonial.

But there was another interpretation of the tracings on the pale face seen in the gloomy cell of St. Anne's. Whether intelligence was crushed and clouded by persecution and captivity, or whether his exquisite organisation, his constant intercourse with those "things unseen," his own thoughts and emotions, the throes to which so keenly sensible and sensitive a nature is subject in passing through even a happy and harmonious career,

initiated a mental revolution or not, Torquato Tasso was undoubtedly of unsound mind. He was troubled with strange apprehensions and nocturnal apparitions—lights which were seen shining or sparkling in the air; his ears were assailed by frightful noises, by hissing, tingling, ringing of bells, and the ticking of a clock. Often in his sleep he was tormented with fantastic visions of distress and turmoil. Amidst so many torments there appeared to him in the air the image of the Virgin and Saviour, sphered in a circle of coloured vapours, which was accepted as a rainbow of hope, and as a miracle. It is interesting that Benvenuto Cellini saw a vision of precisely similar aspect, in a similar cell and similar circumstances. Tasso is attacked by fever—the Virgin is appealed to; he recovers—and a vow of pilgrimage to Loretto testifies his gratitude as a devotee; a sonnet and a madrigal as a poet.

The phantasm was no longer the imp, the Foletto, which confined itself to stealing his papers and his money, but “a celestial being, but palpable to sense, inspiring lofty and glorious imaginings, impassioned and transcendental eloquence, which visited him when restored to his beloved Naples, when surrounded by all the pleasures and refinements which wealth, friendship, and the profusion of princes could command, when calm and collected, in solitude, and in society. This apparition was no play of fancy; to him it was a verity, a reality, in which he believed as firmly as in his own existence; it was no spectre, no shadow of the past, conjured up by fear, or remorse, or excitement, for although he was excited while it was present, it was by the fervour of intellectual exercise, of a high and holy moral purpose. His companions were sceptics, but so entire and absolute was his faith that he offered, as he could not convince them by reason, to do so by experience, “I shall cause the spirit in which you refuse to believe, to appear before your own eyes.” “I accepted the offer,” says his biographer, “and next day, when we sat by the fire conversing, he turned his eyes towards the window, and looking with steadfast attention, appeared so completely absorbed that when I called to him he did not answer. ‘See,’ said he at length, ‘see, my familiar spirit comes to converse with me.’ I looked with the greatest earnestness, but could see nothing enter the apartment. In the meantime, Tasso began to converse with this mysterious being. I saw and heard himself alone. Sometimes he questioned, and sometimes answered; and from his answers I gathered the sense of what he had heard.

“The subject of his discourse was so elevated, and the expressions so sublime, that I felt myself in a kind of ecstacy. I did not venture to interrupt him, or to trouble him with questions,

and a considerable time elapsed before the spirit disappeared. I was informed of its departure by Tasso, who turning towards me said, 'In future you will cease to doubt.' 'Rather,' said I, 'I shall be more sceptical; for although I have heard astonishing words, I have seen nothing.' Smiling, he replied, 'You have perhaps heard and seen more than——' he stopped short; and fearing to importune him by my questions, I dropped the conversation. And in this belief and communion he lived and died."

But were these impressions which fell powerless on the senses of his companions in the vulgar sense delusions? Did not Torquato Tasso see and hear the being to whom he responded? were the words and the meaning his own, or were they not as real to his consciousness as the words and the meaning of the witness who offered a negative testimony as to their reality? What proof, in short, is there that such apparitions are not as substantial in a logical sense as the convictions by which they are accompanied, the conditions of the nerves which are in some manner affected, or as the vibrations of that air and light upon which all knowledge both of an external and of a supernatural world depend?

ART. IV.—IDIOCY.*

BY FREDERIC BATEMAN, M.D. F.R.C.P.,
Physician to the Norfolk and Norwich Hospital, &c.

As the Consulting Physician to the Essex Hall Asylum, I beg the favour of your attention for a few moments whilst I endeavour to plead the cause of that useful institution, in the hope that I may excite an interest in its objects amongst the inhabitants of Lynn and its immediate neighbourhood. In the few words that it is my privilege to address to you, I do not propose limiting my remarks to the claims which the Eastern Counties' Asylum for Idiots has upon your support, but I desire to take a wider view of my subject, and to advocate the cause of the 30,000 stricken members of the human family in England and Wales, who, by the very nature of their infirmity, are unable to say a single word for themselves. I feel considerable diffidence in addressing you this morning—a diffidence not arising from any feeling of weakness in the cause I am espousing, but rather from fear that my imperfect advocacy may not do full justice to the paramount importance of my subject. It is a common practice for speakers to try and produce a sensational effect, and to create an artificial interest in their subject, by grossly exaggerating the wants of those for whom they plead. Now, I have a plain unvarnished tale to tell, and without indulging in the language of hyperbole, I trust I may rouse a chord of sympathy in your hearts, and induce you to lend us a helping hand in our endeavours to grapple with one of the most direful calamities to which the human race is liable.

In making an appeal to the public, it is most important accurately to define the object, aim, and end of such appeal. We are met here to-day to consider what can be done to raise a portion of the human family from the slough of despond and abject misery into which it has fallen. England is proverbially a land marked by the benevolence and philanthropy of its inhabitants, and a large amount of money annually flows into the coffers of our charitable institutions, and in no country in the world is so much sympathy evinced towards the sick and suffering poor as in this highly favoured land. But whilst fully acknowledging this, I feel that there is one class of the community which has been, at all events till quite lately, singularly

* An address delivered at the Town Hall, Lynn, on January 30, 1879, at the annual meeting of the Eastern Counties' Asylum for Idiots.

neglected, and which has not received that share of British sympathy and British support, to which, from the peculiar nature of its infirmity, it is entitled. The class to which I allude is that commonly known as Idiots; and I think that popular ignorance as to the nature of idiocy, and misconception as to its capacity for treatment, have been the sole cause of this apparent neglect. I hope I shall be able to show you that a great social evil exists amongst us, that its effects are sorely afflicting our population, that much may be done to remedy this evil, that the Essex Hall Asylum is successfully grappling with it, and that our efforts have been attended with signal and unexpected results. The indefatigable superintendent of the asylum, Mr. Millard, will probably enter into some details as to the internal arrangements of the institution, and the task has been deputed to me to say a few words about the Natural History of the idiot and his place in creation; and as this is the fourth time, within a comparatively recent period, that I have had occasion to speak about idiocy from a scientific point of view, it is scarcely possible but that my thoughts must occasionally run in a similar channel as on former occasions; for, although practical science is ever advancing, scientific truths remain the same.

Let me now try and give a definition of idiocy. What is an idiot? This is a question about which some difference of opinion exists in the scientific world. The word "idiot" is derived from the Greek *ἴδιος*, solitary, and expresses the condition of an individual isolated, as it were, from the rest of nature. Yes, he is indeed alone in the world; it is true he sees and hears, but he fails to perceive and appreciate; the beauties of nature and of art are nothing to him; he is indifferent to the splendour of the rising and the setting sun, and he stands unmoved at the sight of the starry firmament with those mighty orbs which are suspended over the great pavilion of space—the moon in her gentle pale serenity gliding through the sky, the stars, those bright gems that gleam and sparkle on the crown that encircles the sable brow of night,—all this is nothing to him, for the pall of a universal night has fallen upon him. Shakespeare, that great delineator of character, in several of his dramas gives a description of idiocy. In "Titus Andronicus," he speaks of the idiot as "one who holds his bauble for his God," and elsewhere he speaks of "a tale told by an idiot, full of sound and fury, and signifying nothing." One of the best definitions, and one that I accept with some slight reservation, is that of Dr. Bucknill, one of the leading psychologists of the day:—"Physiologically an idiot is a human being, who, from defect or disease of the brain, at a period of life before the mind has become developed, has suffered an arrest of mental development to such an extent that he is

incapable of the ordinary functions and duties of social existence." "Idiocy," says Dr. Ireland, one of the most recent writers on the subject, "bears much resemblance to the ordinary conditions of infancy. In idiots the mental state may be said to be fixed in the infantile state, or very slowly to move towards the efficiency and maturity of the motor and reasonable powers which characterise the normal adult." In old books on medical nomenclature, idiocy has been classed amongst the varieties of insanity, and in most of our lunatic asylums of the present day you will find a certain number of idiots. Idiocy, however, is not a form of insanity, and has no right to be so classed. In fact, the association of idiots with the insane is a great disadvantage to the former; and in a communication I have lately received from Dr. Hills, the experienced superintendent of the Norfolk County Asylum, I find that he strongly urges the necessity of separate establishments for the care and treatment of idiots. Having been informed that it is contemplated to introduce a Bill into Parliament next session for the proper care of pauper idiots, I desire to press this point upon the legislators of the country, of whom I have the honour to see one amongst us to-day; and as in this county, our union houses are far too large for the requirements of the age, I would suggest that one or more of them might, with advantage, be devoted to the care and treatment of pauper idiots. The distinction between idiocy and insanity is clear and marked. The madman suffers from an abnormal development of the brain, the idiot from an ill-developed brain. In the one, the mind is not in proper balance, in the other it is not in proper power. Idiocy has a superficial resemblance to dementia, much in the same way that the dotage of old age sometimes resembles the weakness of childhood. Dementia begins with average intelligence, which gradually diminishes; idiocy begins with a low amount of intelligence, which gradually increases.

Time will not permit me to enter minutely into the causes of idiocy. An excellent and exhaustive monograph has been written on the subject by Dr. Howe, a great American authority, in which he says that idiocy is not an evil necessarily inherent in society, but that it is merely the result of a violation of natural laws, which are simple, clear, and beautiful, and which, if strictly observed for two or three generations, would totally remove from any family, however strongly predisposed to idiocy, all possibility of its recurrence. In treating of the hereditary transmission of idiocy, Dr. Howe lays great stress on the habitual use of alcoholic drinks as tending to bring families into a low and feeble condition, which thus becomes a prolific cause of idiocy in their children. He substantiates this statement by

tables, in which he shows that out of 359 idiots, the condition of whose progenitors had been ascertained, 99 were the children of inveterate drunkards; and the report goes on to say further, that when the parents were not actually habitual drunkards, yet, amongst the idiots of the lower class, not one quarter of the parents could be considered as temperate persons. Just now that the attention of the Legislature is being prominently called to the treatment of habitual drunkards, it cannot be too widely known that their innocent offspring are but too frequently the victims of the brutish excesses of their parents, who, some years since, were described by Mr. Cross, the Secretary of State for the Home Department, when receiving a deputation on the subject, as not quite criminals nor quite lunatics, although nearly approaching both classes in many cases. Dr. Howe's statistics fully corroborate the pertinency of Mr. Cross's remarks.

Before quitting the question of the cause of idiocy, I should like to say a word or two about what is technically called its histology and its pathological anatomy. What is there in the brain that makes one man a senior wrangler and another an idiot? Is it a defect in the quantity or the quality of the nervous matter of the brain? Does it depend on a malformation of the cranium, on the size or shape of the head, or on the fineness and degree of complexity of the convolutions? Upon this point, I am bound to tell you that science speaks with a somewhat uncertain sound, volumes having been written upon it without any definite solution or tangible result. It is a subject, however, of extreme interest, not only to the man of science, but especially to the theologian; and, if this were the time and place, I could show that the study of idiocy points to conclusions directly opposed to the materialistic tendencies of the day. A great many idiots cannot be recognised as such by the mere examination of their skulls; and although there is undoubtedly a minimum size of head, below which the possessor is necessarily an idiot, yet no constant relation exists between the general development of the cranium and the degree of intelligence, and sometimes the brain of idiots presents no deviation in form, colour, or density from the normal standard.

I had the privilege last summer of attending an International Congress held in Paris for the study of mental disease, and for the solution of obscure psychological problems. At one of the sittings of this Congress, a Russian Professor, Dr. Mierzejewski, read a most elaborate paper on the causes of idiocy, illustrated by casts of the brains of idiots and of certain animals. The learned Professor laid great stress on the histological or microscopical examination of the brain of idiots, which he said revealed most minute and interesting lesions and anomalies in the struc-

ture of the nerve centres of these degraded beings. In order to understand the great value of Dr. Mierzejewski's investigations, I must remind you that there is a certain school of modern philosophers who are trying to materialise everything. They utterly ignore any spiritual attribute in man, they regard metaphysics as a relic of mediæval superstition, and they assert that mind, thought, and consciousness are bodily functions, and simply the result of some molecular or atomic change in the brain; indeed the German philosophers go so far as to say that life itself is only a "special and complicated act of mechanics;" that there is no real distinction between living and dead matter, and that vitality is a metaphysical ghost (*ein metaphysisches Gespenst*). As I have in my published researches endeavoured to show how these mere assertions are totally unverified by scientific inductions, I need not dwell upon them here. As the manifestation of the intellectual powers is supposed to be in some way connected with the development of the grey matter of the cerebral convolutions, one would expect to find in idiots a deficiency of this element of brain tissue. But Dr. Mierzejewski's researches show that this is by no means the case, and he mentioned an instance of an idiot, in whose brain the surface of grey matter was enormous. So it would seem that there is no fixed relation between the amount of grey matter and intellectual power, for richness of grey substance and abundance of nerve cells may be accompanied by idiocy. Now these startling statements were not made in a hole and corner, but were enunciated in the presence of leading psychologists from all parts of the world; they must therefore be faced by the materialists. Without unduly exaggerating the importance of Dr. Mierzejewski's experiments, it must be admitted that very great interest attaches to them at this juncture, when attention is so widely directed to the mysterious connection between matter and mind. Unhappily, instead of solving the question, the Russian Professor's researches tend to shroud it in a still deeper mystery, and show that what has been termed the "slippery force of thought—the *vis vivida anima*"—cannot be weighed in the balance; and they fully justify the eloquent language of a recent writer when he says:—"Far more transcendent than all the glories of the universe is the mind of man. Mind is indeed an enigma, the solution of which is apparently beyond the reach of this very mind, itself the problem, the demonstrator, the demonstration, and the demonstrand." To those who may wish to pursue this subject further, I recommend a perusal of an essay on "Materialistic Physiology," by Dr. Winn, in the *Journal of Psychological Medicine* for 1877. I make no apology for introducing this much-disputed question, for I believe that the Essex

Hall Asylum and other kindred institutions are destined to become the battlefield where this difficult problem of mental philosophy is to be fought out and definitely settled. At present, although the pseudo-philosophers of the day have bewildered the public with the wild flights of their imagination, they seem to me to be no wiser than the Latin poet of 2,000 years ago, when he said :—

*Spiritus intus alit, totamque infusa per artus
Mens agitat molem, et magno se corpore miscet.*

One thing we can positively assert—that idiocy is the result of defective physical organisation ; but we must take care not to confound thought, mind, and consciousness, with the instrument by which these attributes become externally manifested. The idiot, says Dr. Howe, has so far violated the natural laws, so far marred the beautiful organisation of the body, that it has become an unfit instrument for the manifestation of the powers of the soul. This idea has been aptly illustrated by comparing the brain to a musical instrument, the soul to an invisible player. If the harp have a thousand strings and they all keep in tune, then the soul discourses sweet and varied music ; but the idiot's instrument is a wretched thing, and its few strings are so sadly awry, that even in a seraph's hands, it could give nothing but jarring and discordant strains.

According to the Census of 1871, there are in England and Wales 30,000 idiots, or thirteen in every 10,000 individuals ; but as the returns are probably defective, owing to the sensitiveness of parents, who naturally desire to conceal the fact of idiocy in their families, it is considered that the above estimate is below the mark. It is only within a comparatively recent date, that these unfortunate creatures have been treated as belonging to the human family. In the middle ages, it was a common custom for our feudal lords to have one or more of them as butts in their retinue ; and Addison tells us that as late as 1710, idiots were still in request in most of the courts of Germany, where there was not a prince of any magnificence who had not two or three in his retinue, whom the courtiers were always breaking their jests upon, and Addison aptly adds :—

*Thus one fool lolls his tongue out at another,
And shakes his empty noddle at his brother.*

They were formerly considered to be beings without souls ; and it is even related of the great reformer Luther, that when asked by a father what should be done with his idiot boy, Luther replied that the child might be drowned, as he possessed no soul ! Times are happily changed, and a revolution has taken place in the treatment of these benighted members of the

human family, who have ceased to be the butt of scorn and ridicule. We also now concede to the idiot the possession of the Tripartite Nature of Man, for he has not only the *σῶμα* or material part, and the *ψυχὴ* or principle of animal life, but he also undoubtedly possesses the *πνεῦμα* or principle of immortal life; and the result of treatment at Essex Hall will show that there may be kindled up in their dark and twilight spirits some dim anticipations of a brighter world. We do not drown idiots at Essex Hall, but we teach them to swim against the adverse currents to which they are exposed; we buoy them up on the tempestuous waves of life; we pilot them through the rocks and shoals of their ill-starred career, till their chequered race is run, and they are safely landed in the haven of everlasting rest. I ask you to help us in our attempts to awaken faculties hitherto dormant, to restore lost minds, to arouse these unhappy beings from a moral death to a new birth of perception and feeling. A noble example has been set by the most illustrious landowner in the county, who has this day intimated his gracious intention to extend his royal patronage to an institution especially established for the care of idiots from the four counties of Norfolk, Suffolk, Cambridgeshire, and Essex. It is, therefore, essentially the cause of a Norfolk charity that I am pleading to-day; and I beg of you, when you leave this hall, not to allow the condition of the 700 poor idiots of Norfolk to fade from your minds. I appeal to you who have had the joy of watching the dawn of infant intelligence, and have experienced the delight of seeing the capacities shown in the early life of your own children gradually ripen and develop into the intelligence of manhood, to look with an eye of pity on the numerous households rendered miserable by the intolerable incubus of the presence in their midst of an idiot child. At Essex Hall, we are trying to mitigate, as far as we can, this 'great social calamity, and our efforts have hitherto been crowned with unlooked-for success; but our means of usefulness are limited, we want more help, and I earnestly press the claims of the Eastern Counties Asylum for Idiots on the sympathy, benevolence, and philanthropy of the inhabitants of Lynn, and of the county of Norfolk generally.

ART. V.—ON THE PATHOLOGY AND TREATMENT OF CEREBRAL DISEASE.

No. V.

BY ROBERT HUNTER SEMPLE, M.D.,
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In treating in a previous paper on the Inflammatory Diseases of the Brain I adverted to the difficulty which exists in the present day of defining the exact meaning of the term "inflammatory," the earlier definitions of the word being now inadequate to express the idea intended to be conveyed. In former days, inflammation was a word easily and generally understood, and the symptoms of inflammation were pretty well recognised; but at the present time many maladies, or assemblages of symptoms, although apparently inflammatory, are no longer regarded in that light, and, on the other hand, many structural changes of organs and tissues are now by some authorities regarded as inflammatory in their origin, although the well-known and hitherto recognised features of inflammation are absent. My meaning will be readily understood by contrasting a typical inflammation, as it was formerly regarded, with certain other morbid conditions which are now admitted by some recent writers into the same category. In the conjunctiva, for instance, the capillary vessels are often seen to be enlarged and distended with blood, and at the same time the eye is exceedingly hot and painful; after a time, according to circumstances, either the swollen vessels are disgorged of their blood and the membrane resumes its usual transparency, or the disease advances in intensity, and pus is thrown out over the conjunctival surface, or, when the iris is attacked, lymph is seen to be effused, the colour of the organ is changed, and the pupillary aperture is altered and obstructed. In such a case as this, there are all the features of the old-fashioned typical inflammation, namely, the congestion of the capillaries, and the subjective and objective phenomena of heat, swelling, redness, and pain; and, moreover, there are all the typical terminations of inflammation—namely, resolution, or the return of the parts to their normal condition; suppuration, or the effusion of pus upon the mucous surfaces; and effusion of lymph, which occurs in certain membranous structures.

On the other hand, such diseases as cirrhosis of the liver and tubercular consumption are now regarded by some writers as forms of inflammation, and many specious arguments are adduced in favour of this view. In the first-named disease, it is assumed that the hypertrophy of the fibrous structure of the liver is due to an inflammatory process; and in the second, it is now supposed that the tubercular deposition in the lungs is the result of a pre-existing inflammation of the pulmonary substance or the air-tubes, or, in other words, that pulmonary phthisis is only a sequel or accompaniment of bronchitis, pneumonia, or pleurisy. Again, there are many diseases which, at former times and in other countries, were considered as varieties of inflammation, but which are now, in this country at least, no longer regarded in that light; as, for instance, typhoid or enteric fever, which, from its presenting ulcerations on the mucous membrane of the lower parts of the small intestine, was once classed as a special inflammation, and was called *gastro-entérite* by Broussais.

Even the same medical author has at one time regarded a malady as inflammatory which at a subsequent period he has excluded from that category, as Bretonneau, for instance, who applied the word *Diphthérite* or *Diphtheritis* to the malady which he himself subsequently called *Diphtheria*, the change being due to the fact that his opinions as to the inflammatory nature of the affection had undergone a change in the interval. For such reasons, and many others, it is obviously a matter of great difficulty to fix the limits which separate "inflammation" from any other morbid process; and the difficulty is the greater in the present day when, by the labours of modern pathologists, a multitude of morbid actions and processes have been detected which tend to alter the structure of organs and tissues, but which it is impossible to range under any one comprehensive title.

Such being the general difficulty hanging over the definition of inflammation, the inquiry into the distinction between the inflammatory and non-inflammatory affections of the brain is further beset with special difficulties arising from the nature of the organ concerned, and from the mystery which has ever shrouded and still shrouds the connexion between the material conformation of the intra-cranial mass and the manifestations to which its operations give rise. In its healthy state, this congeries of blood-vessels, membranes, and nervous ganglia and fibres—this chemical compound of water, albumen, and phosphuretted fats and earthy salts,—presides over and directs an infinitude of subordinate agents in the bodily economy, and is moreover the medium of expressing the faculties, the emotions,

the passions, the sympathies, the joys and the sorrows, the sum of all of which constitutes the mind of man. In its morbid conditions how varied are the phenomena this organ presents, how contradictory are the results observed! Sometimes the most serious and extensive lesions of its substance are unattended with proportionate disturbance of the bodily or the mental manifestations; at other times, lesions apparently slight induce the most formidable and even fatal consequences; and very often the organ suffers as a whole, in its functional relations, from irritation of remote regions or parts, although undergoing itself no structural change whatever.

Amidst a host of difficulties by which the pathology of the brain is surrounded, there are perhaps a few truths which may be regarded as established data for the guidance of the practitioner of medicine. In the first place, there can be very little doubt that the central parts of the brain, or those which underlie the convolutions, have very little share in producing the morbid manifestations which usually indicate cerebral disease. This statement is abundantly borne out by the records of military surgery, which show that large portions of the cerebral matter have been removed without danger to life, and without precluding the chance of the brain being eventually restored to health. The clinical history of brain-diseases and the records of post-mortem examinations are no less conclusive on this point, for, as many besides myself have shown, the most extensive disease of the medullary structure, or the presence of abscesses or tumours in the central mass, has been found quite compatible with the maintenance of life and even the enjoyment of health.

In the next place, it is proved that when the seat of disease lies in the track of some of the nervous threads passing to the various organs and limbs, sometimes the functions of special sense will be impaired, sometimes the limbs will be paralysed or thrown into convulsions, sometimes pain will be experienced in remote parts, or sensation will be impaired or abolished altogether.

A third fact, pretty well established, is that the periphery or circumference of the brain is exquisitely sensitive, and that injuries or diseases of this portion are attended with the most serious consequences. Hence, the inflammation of the membranes of the brain, especially of the arachnoid membrane and the pia mater, is one of the most fatal maladies known in the practice of medicine, and will be discussed in some of its bearings in the ensuing pages of this paper.

The question of local lesions of the brain, and of the connexion of these with special manifestations of morbid action,

mental or bodily, is now occupying some of the most acute intellects among physiologists and pathologists, but is too extensive for detailed consideration in the present paper. It may be mentioned, however, *en passant*, that the points at issue on this subject at present are whether the brain always acts as a whole, being sensitive to any injury of any part of its substance, or whether certain definite manifestations in some of the limbs or in certain groups of muscles distinctly correspond to the injury or disease of circumscribed portions of the cerebral structure. The direct experiments of Hitzig and Fritsch in Germany, of Ferrier in our own country, and of Albertoni in Italy, tend to prove the connexion between local irritation and definite morbid manifestations; and the clinical observations of Hughlings Jackson point in the same direction. On the other hand, it is well known that the great majority of facts at present known merely show that injuries of the brain are usually attended or followed by general morbid manifestations, and Dr. Brown-Séquard, whose authority on such questions is very great, now maintains that the brain, whatever may be the injury or in whatever part of the organ it may be situated, acts as a whole, and not by the separate agency of its individual parts. It is not a little puzzling to the inquirer after truth to follow the lucubrations of this distinguished physiologist, and it is disappointing to find him thus expressing himself in a recent lecture at the College of France: "I have taken upon me the difficult work to show you that almost everything you have learned, either in the course of your lectures or in books which treat of the actual state of science regarding the doctrines of the physiological and pathological actions of the nervous centres, must be thrown overboard as entirely false."* It is right to add that Dr. Brown-Séquard includes his own published doctrines in this sweeping condemnation.

Recurring to the immediate subject of the present paper—namely, the Inflammatory Diseases of the Brain—I observe in the first place that the word "inflammation" is here used by me in its ordinary sense, as characterised by its generally recognised symptoms, and as followed by its usual results—namely, the formation of pus, or the effusion of serum or of lymph. It is reasonable to believe, however, although it is very difficult to prove, that inflammation of internal organs may stop short of these last-named results, just as we observe that a visible inflammation of the conjunctiva may terminate in resolution, and without suppuration; and undoubtedly this is the termi-

* *British Medical Journal*, Feb. 22, 1879.

nation which medical treatment is directed and intended to promote.

However desirable it may be to divide the inflammations of the brain according to the structures which are involved, the distinction in practice is exceedingly difficult, and even the primary division between the inflammation of the substance of the organ (or cerebritis) and that of the membranes (or meningitis) can rarely be clearly established, and during life the diagnosis is always very doubtful. But as a matter of fact, I question very much whether in the present day we can assert that there is such a disease as idiopathic cerebritis. As I mentioned in a previous paper, it is quite evident that the cases formerly described as "inflammation of the brain" were really, in the great majority of instances, nothing more nor less than certain forms or conditions of typhoid or enteric fever, which often begins with symptoms of violent delirium and other indications formerly supposed to denote inflammation of the cerebral mass. It is now known that although this fever is often fatal at a very early period, owing to the virulence of the poison circulating in the system, yet there is no specific inflammation, properly so-called, and the delirium and other symptoms pass away when the fever has run its destined course. The large bleedings and other so-called antiphlogistic measures so freely adopted in former days in such cases must have been useless, if not injurious, and yet a great number of patients recovered, or at any rate escaped, under the treatment.

Still there are a few cases, such as I have related in the former paper, which, though not strictly idiopathic in their nature, may be regarded as instances of inflammation of the substance of the brain. Such are the cases (though these are far more uncommon than is generally supposed) caused by exposure to a burning sun, especially in tropical climates; the cases where cerebritis arises from severe injuries, as in concussion of the brain, or from disease of the cranial bones; and those which result from the excessive immediate effects of alcohol. In some of these cases depletory measures, judiciously employed, and at an early stage, appear to be of great service, and many complete recoveries take place. But in the cases now to be mentioned—namely, where the membranes are affected—the danger is much greater and the chances of recovery far less.

In inflammation of the membranes, besides the fact that the disease almost always extends to the cerebral mass itself, there is effusion of pus, or serum, or lymph, from the inflamed surfaces; and these effusions, pressing upon the substance of the brain, give rise to the most serious symptoms, and unless they are removed by medical or surgical means they are almost necessarily fatal.

INFLAMMATION OF THE DURA MATER.

Inflammation of the dura mater, as an idiopathic disease, and apart from that of the other cerebral membranes, is very rare, but it is by no means an uncommon circumstance for the dura mater to be inflamed in consequence of injuries to the scalp. It is well known that the cranium is immediately invested with a fibrous membrane called the pericranium, which is the periosteum of the skull; and the dura mater, lying between the bony cranium and the arachnoid membrane is, in fact, an internal periosteum. Now, although the pericranium and the dura mater are separated by the cranium, there appears to be a close sympathy or relationship between these two membranes, their anatomical structure being the same, and a vascular communication existing between them through the medium of the cranium. Hence it happens that injuries affecting the external membrane are often followed by disease of the dura mater, and when pus is effused beneath the pericranium a similar effusion occurs between the cranium and the dura mater. A comparatively slight injury to the outside of the head will thus often be attended with the most serious, or even fatal, consequences; and I was first impressed with the gravity of such cases when I was a dresser at the hospital to which I was attached. A young woman had received an injury to the head which was by no means apparently of a serious character, and which seemed to be doing well under ordinary treatment, when some days after the receipt of the injury the parts became swollen and puffy and the patient became comatose, and died; and after death an effusion of pus was found on the surface of the dura mater. I have seen other such cases since, but the primary injury was of a much more serious character. It is therefore necessary to regard all cases of external injury to the head as of great importance, considering this anatomical relationship between the pericranium and the dura mater.

The early symptoms of inflammation of the dura mater are not well marked, but those of the effusion of pus or lymph, which is its consequence, are well known, as they are frequently observed in surgical practice, and they result from accidents to the head. They indicate compression of the brain, and are the same in their nature whether they arise from extravasations of blood from natural causes or from external injuries. The patient becomes stupid, sleepy, and lethargic, and falls into the state of what is known as coma, from which he cannot be roused, or only slightly and with very great difficulty; the breathing is heavy and stertorous, the pupils are contracted or

dilated—sometimes one is contracted and the other dilated : the pulse is full and strong and often slow ; the fæces are passed involuntarily, and the urine is often retained. When these formidable symptoms are present the chance of recovery is very small.

The present paper being devoted to the inflammatory diseases of the brain and its membranes, the consideration of many other causes of compression of the brain, such as the existence of tumours, the hæmorrhagic effusions of apoplexy, the pressure caused by depressed portions of fractured bone, and many similar conditions, is necessarily omitted. For the same reason, in reference to treatment, the relief afforded by medical or surgical ministrations, in conditions other than those caused by inflammation, is also passed over, and the following brief remarks on therapeutical management relate in the first place only to cases of inflammation of the dura mater and its consequences.

As an idiopathic disease, I have just remarked that inflammation of the dura mater is very rare and is very seldom unaccompanied by disease of the other membranes, and it is perhaps only in the field of surgery (if indeed it exists in that) that such a condition can be recognised. If, however, after the receipt of some injury to the head (and, as has been observed, the apparent slightness of the injury affords no criterion of the amount of internal lesion) the patient becomes dull, sleepy, and comatose, and exhibits the other symptoms just indicated, the existence of effusion on the surface of the dura mater may be strongly suspected, and remedial measures should be resorted to, although it must be confessed that they are not often of much avail. Cold should be applied to the head, the bowels should be opened by croton oil dropped upon the tongue, perfect rest should be enjoined, and light should be excluded from the patient's room. The abstraction of blood from the arm may be justifiable with a view of diminishing the amount of that fluid in the brain. But, after all, the only remedial measure which promises relief in such cases, is the removal of the compressing cause, and this can be effected solely by the use of the trephine.

But the difficulties in the way of the successful use of this instrument are various, for, in the first place, the existence of pus or other fluid cannot be determined with certainty, and if it could, its exact situation cannot be fixed ; and it cannot even be proved whether the effusion is on the surface or in the substance of the brain. Mr. Erichsen, in his learned and elaborate "*Science and Art of Surgery*," relates two cases in illustration of these remarks, in both of which there was sup-

puration of the brain in consequence of injury to the head, and both were fatal. In one case the trephine was employed by the late Mr. Samuel Cooper, but after death a large amount of thick yellow lymph was found covering both hemispheres, and there was also an abscess in the substance of the brain. In the other case the trephine was not employed, but an abscess was found in the anterior lobe on the injured side, and therefore if trephining had been performed it would have been useless. Mr. Erichsen alludes to a bold and, as it turned out, a successful operation by the celebrated French surgeon Dupuytren, who, in a case of cerebral injury from accident, plunged a bistoury into the substance of the brain, and thus luckily relieved the patient of an abscess in this situation. A case which in its bold treatment and in its successful results rivals that of Dupuytren has just been recorded by Mr. Hulke, of the Middlesex Hospital, at a recent meeting of the Royal Medical and Chirurgical Society.* A boy struck his forehead against a fence, grazed the skin, and was momentarily stunned. He continued to work, however, for seven weeks, during which time he had some pain in the forehead, and then retching and hemiplegia supervened. The frontal bone was trephined at the seat of injury, and a small fissure was recognised in its outer table. The dura mater seemed healthy. An aspirator-trocar being pushed into the brain, pus rose into the syringe. The abscess was opened through the membranes with a knife, and in all about three drachms of pus were let out. The patient recovered, but lost the sight of both eyes by optic neuritis.

In connexion with this subject I may allude to the investigations now in progress with a view of determining the localisation of the cerebral functions, and thereby of connecting the existence of definite outward symptoms with local internal cerebral diseases or lesions. Interesting as these investigations are in every point of view, they will be eminently so if they enable the surgeon, in cases of local pressure on the brain, to determine on what point he should apply the trephine, and thus relieve the sufferings of the patient. Some such cases are already recorded by French surgeons, and it may be useful to mention especially the following, viz.: Broca, "Diagnosis of an abscess situated along the region of language: trephining of this abscess" (*Revue d'Anthropologie*, 1876); Lucas-Championnière, "Indications drawn from cerebral localisations for trephining the cranium" (*Bulletin de l'Académie*, 1876); Proust and Terrillon, "Contribution to the study of cerebral localisa-

* *British Medical Journal*, March 15, 1879.

tions" (*Bulletin de l'Académie*, 1876). The views of these authors, however, are by no means undisputed even by their own compatriots, and I mention the matter only to draw attention to a department of surgery and medicine, in connexion with physiology, which cannot fail to be attended, though perhaps only at some future day, by the most useful results.

It is, as I have previously observed, very difficult, if not impossible, to distinguish, during life, the symptoms indicating inflammation of the brain itself from those denoting inflammation of the membranes; but it is utterly hopeless to attempt any diagnosis between the inflammation of the arachnoid membrane and that of the pia mater. These two last-named membranes are so intimately united together that any cause which gives rise to inflammation in one must necessarily affect the other. But the diagnosis of cerebral inflammation at all has been rendered more difficult than formerly in consequence of the development of our modern and more correct views of pathology, by which it is made manifest that many indications, supposed to denote inflammation of the brain or its membranes, are due only to irritation or to sympathetic disturbance of those structures. The more accurate views now entertained, for instance, with regard to typhoid or enteric fever, have already been briefly alluded to as proving that a great number of the cases formerly described as phrenitis, or cerebritis, or brain fever, really belong to the category of specific fevers. Such cases, then, when treated, as they formerly were, by copious depletion, including bleeding and purging, were regarded, if the termination happened to be favourable, as the triumphs of the so-called antiphlogistic treatment; and when the result was unfavourable, it was considered that the treatment had not been sufficiently vigorous, and that enough blood had not been drawn.

I have previously shown that the cases to which the name cerebritis or phrenitis can properly and exclusively be applied, are very limited, and that this disease is really due to only a comparatively few causes.

INFLAMMATION OF THE ARACHNOID MEMBRANE AND PIA MATER.

The pathological or post-mortem appearances of inflammation of the membranes of the brain are sufficiently well marked; and although they are often associated with those of inflammation of the brain itself, yet they are often capable of distinct limitation. But, again, in consequence of the advances made in modern pathology, it is very difficult to dissociate inflammations of the cerebral membranes from different diathetic conditions affecting the individual; or, in other words, it would be presumptuous

to declare that meningitis is ever distinctly an idiopathic disease—that is to say, that it may arise in a person previously quite healthy and free from any constitutional taint. Scrofula, rheumatism, syphilis, are now each proved to penetrate into all the internal organs, and it would be perhaps erroneous to admit that meningitis exists independently of any of these conditions.

However, the appearances after death in meningitis are often distinct, and although I do not attach much importance to the mere redness or vascularity of the membranes, yet the results of the inflammatory process may be traced in the presence of adhesions, and in the effusion of pus, serum, or lymph. The effusion of *pus* is rare, and when it is observed, it is generally in cases of injury or accident to the head, and is then found on the surface of the dura mater. The effusion of *serum* is very common, but the amount varies exceedingly—from an ounce or two to several pints. It must be remembered that there is naturally a small amount of serous fluid between the membranes, both of the brain and of the spinal cord, and this circumstance should be taken into account in determining the appearances characteristic of meningitis. As a consequence of the morbid effusion the arachnoid membrane presents an opalescent appearance, and the fluid runs out when an incision is made into the membrane. The effusion of *lymph* from the membranes is very characteristic, and is an indubitable proof of recent inflammation of the arachnoid membrane. This is usually found at the base of the brain about the commissure of the optic nerves, the pons Varolii, and the medulla oblongata; but it is sometimes found in large quantities lying over the upper surface of the brain or running along the course of the fissure of Sylvius.

Meningitis presents two stages—one of invasion, and one of effusion; but sometimes the first stage is insidious in its attack and the symptoms are consequently obscure. But in a typical case the symptoms of the first stage are well marked, and when taken all together they leave little doubt as to the nature of the affection. The malady commences with rigors, there is then pain in the head, intolerance of light and noise, and irritability of temper. In children the disease often begins with a violent scream or cry, the head is thrown in various directions, and there is sawing of the air with the hands. The heat of the head is increased, and the temperature, as observed by the thermometer, is notably augmented; the skin is dry and hot, and the pulse is frequent and strong; the urine is scanty and high-coloured, and the bowels are constipated, or, if they be opened, the stools are pale-coloured and offensive in smell. In addition to these general symptoms, there are the special

indications of *contraction of the pupils* and *vomiting*. These two last-named symptoms are of the highest importance, and when taken together are exceedingly significant. Each taken by itself is not so important. I have now a case under treatment where the pupil appears to be permanently contracted, and has been so, to my knowledge, for at least two years; and as for vomiting, it is of course well known that this symptom may arise from a variety of causes quite independently of cerebral disease. But, in brief terms, when there are, together with general inflammatory and febrile symptoms, pain in the head, increase of temperature, diminished secretion of urine, absence of the specific characters of typhoid fever, constipated bowels, contraction of the pupils, and vomiting—there can be very little doubt that the patient is labouring under the first stage of meningitis.

After a time, however, these symptoms are replaced by others, the supervention of which tends to confirm the diagnosis. The inflammation results in the effusion of fluid in or upon the membranes, and the patient falls into a lethargic or comatose condition, from which he can be roused with very great difficulty, if at all; the pulse is now full but slow, and the pupils are dilated—and this last symptom, following upon the previous ones, is but too sure an indication of effusion. But not only does this passive condition exist, but various movements of the muscles are observed, especially as the disease advances: there is often squinting, from irregular action of the muscles moving the eyeball; there are often convulsions; sometimes there is rigidity of one of the extremities; and at last, involuntary discharge of the fæces and the urine, jactitation, picking the bed-clothes, and other well-known fatal symptoms close the scene.

The treatment of this terrible disease is too often unsuccessful, but, nevertheless, I am inclined to believe that remedial measures are sometimes of very great service, and that, even in apparently desperate cases, a cure may be occasionally achieved. Bearing in mind the diathetic conditions with which meningitis is very often, and indeed usually, associated, it is clear that the treatment must be directed in the first instance to the constitutional taint. Thus the rheumatic, scrofulous, and syphilitic diatheses respectively must be treated by colchicum, cod-liver oil and iron, and mercury and iodine; but when the inflammation appears to be idiopathic—which is sometimes, though rarely, the case—the ordinary antiphlogistic treatment will be justifiable and is often successful.

I have given in a former paper (No. II.) a remarkable case, treated by myself, and which I believe to have been one of meningitis in an adult, and in which I practised bleeding to

the extent of sixteen ounces with the best results. In this case the intellect and the speech were impaired, there were convulsions of the limbs, the pupils were contracted, the pulse was full and strong, and the blood drawn was buffed and cupped. The bleeding was followed up by the administration of calomel in repeated doses, together with saline purgatives, and in a fortnight from the date of the attack the patient was quite well and had no bad symptoms whatever. I attribute the successful result in this case to the early performance of blood-letting; and I have given several instances, in the course of these papers, showing that this measure, adopted at the commencement of the attack, has often appeared to ward off the very serious termination of the disease.

Like the rest of the profession, I have renounced and condemned, in a very great measure, the practice of bleeding, but at the same time I still regard it as a very valuable method of subduing inflammatory action, especially when adopted at the very outset of the symptoms. In connexion with this subject, I cannot help adverting to the remarkable case recorded in my last paper (No. IV.), and related to me by the subject himself, where an army surgeon, recently travelling on a scientific expedition under a burning sun in the desert of Arabia, and having no other surgeon in the company, was suddenly seized with symptoms denoting inflammation of the brain, and had the boldness and presence of mind to open a vein in his own arm, and with immediate relief.

In the early stage of meningitis, therefore, if the symptoms are well marked, if there be an absence of diathetic complications, and if the patient be plethoric, as will be indicated by the pulse, I think that some kind of sanguineous depletion is justifiable—the manner and the amount being regulated by the age of the patient, the degree of toleration, and other collateral circumstances. In adults, bleeding from the arm may be practised, or at least leeches may be applied to the temples; in the case of children, the latter measure alone will suffice. At the same time the head should be kept cool by evaporating lotions, or ice may be applied in a bladder, and the patient should be kept in a darkened room, and all noise should be excluded. The bowels should be opened by saline aperients, and calomel should be administered in repeated doses, either in the form of pills or powders, or by placing the drug itself on the tongue. There cannot be any doubt as to the efficacy of this mercurial in the cases to which allusion is now made, and more especially in the case of children. It is astonishing how well calomel is borne by this class of patients, both in this and in other diseases, and what large quantities may be given, and for a pro-

longed period, not only without bad effects, but with positive benefit. The milder forms of mercurial preparations, such as the hydrargyrum cum cretâ, are well adapted to the less serious maladies of children, but in the disease now referred to—namely, inflammation of the membranes of the brain—calomel is absolutely necessary, and may almost be considered a sheet-anchor.

By the adoption of the remedial measures now indicated—namely, moderate blood-letting, the use of calomel, and the administration of saline aperients—successful results may often be achieved, and I think it fair to conclude (although this is a matter which does not allow of demonstrative proof) that the supervention of the second stage may be averted.

If, however, the stage of effusion should be reached—as will be only too manifest by the entire change in the nature of the symptoms, the pupils being now dilated, the pulse becoming slow, and the patient comatose—the chance of recovery is very seriously diminished, although all hope must not be abandoned. All depletory measures are now useless, and the only favourable prospect is, that by certain well directed treatment the fluid which presses upon the brain may be re-absorbed and the healthy functions of the organ be restored. Although a successful result is somewhat rare under these circumstances, yet a sufficient number of well-authenticated cases has been recorded, and I myself have seen such an amount of benefit by the application of therapeutical means, that I think an effort should undoubtedly always be made to save the patient. The remedial measures should now consist in the application of repeated blisters to the nape of the neck, by which the absorption of the effused fluids may be promoted; calomel should be freely administered, though in small doses, such as a grain, and for a considerable time; and iodide of potassium should at the same time be administered regularly three or four times a day, in doses of three or four grains or more. By this treatment the most satisfactory results have been obtained, and even in cases where the termination was eventually fatal, I have myself seen so much temporary benefit achieved as to justify the means employed and to encourage future attempts in the same direction.

ART. VI.—THE PHYSIOLOGY OF NIGHTMARE.

BY EDWIN WOOTON.

NIGHTMARE, or incubus, the bane of so many lives, is the term used to denote the psychological state of the man when, having been overcome by sleep, visions of the horrible and loathsome rise before him—now pursuing their victim, now strangling him; while he, the sufferer, feels himself helpless as a child, barely able to move a limb, without power—save to silently gasp the words his being is panting to utter, and which he knows would, if spoken, bring to his immediate aid the strong and friendly arm. It were needless to describe the diverse forms assumed by this malady—for such I must term it; enough, that throughout its various manifestations it presents to the mind of the sufferer one common trait—immediate danger. Of what, then, is this peculiar mental state the result? Blood is supplied to the brain from two sources, the vertebral and internal carotid arteries; it is the storehouse from whence the cells of the encephalon draw the materials by which they are enabled to elaborate themselves for the subsequent discharge of their functions: To the majority of persons if the head be laid on a low pillow so as to result in an increase of the brain's blood supply, sleep will not supervene; and on the other hand, it has been proved that if in the case of the restless the head be supported on a high pillow, sleep is the more readily obtained. From these facts we are led to conclude that the manifestation of energy on the part of the brain is in direct proportion to its blood supply. The left internal carotid artery of a rabbit was cut, the right being ligatured, as also the proximal extremity of the cut left; insensibility occurred in 4 min. 36 secs. Another rabbit was then taken of similar age, size, and apparent strength; both its internal carotids were cut, and insensibility ensued in 3 min. 45 secs. In the case of a third rabbit, in whom not only the internal carotid but the vertebral arteries were cut, insensibility ensued in 70 secs. The conclusions to which these experiments led were as follows:—That the brain is constantly depending for manifestations of energy on its blood supply; that it has not the accumulative and retentive power of the muscle, which latter, after the severance of all arterial communication, is yet capable of acting

for a considerable time. Hence, we have a right to consider that an abnormal localisation of this organ's arterial supply would produce a corresponding increase in the functional discharge of the part affected. It were, perhaps, needless for me to remind the reader of the perfect symmetry of the brain and its arteries; the latter, indeed, appear designed for the purpose of distributing an equal and unceasing current of blood to all the parts supplied. Now, in the very general, and most healthy, posture for sleeping—on the side—there can be, evidently, no tendency to a localisation of blood; and here also we are met by the fact, that nightmare seldom, if ever, occurs when the sleeper is in this position; on the contrary, in the vast majority of cases, in all that have come under my notice, the person is affected only when lying on his back. In this latter position, it need hardly be pointed out, we have two physical results, the latter consequent on the former: first, an increase in the arterial supply of the back of the brain; secondly, a decrease in that of its front. Let us now consider with what psychological phenomena these two positions correspond.

In the former—when lying on the side—there is sometimes a performance of rational processes; the sleeper will argue, take part in, and appreciate the merits of, a conversation. But in the latter position, when the wretched dreamer is on his back, the mental phenomena are horrible and diabolical, and it is to these the name of nightmare has been given. We are thus led to conclude that the primary cause of the malady is the increase of the blood supply to the back of the brain, and a consequent manifestation of local energy; and this opinion is backed by the fact that the respiratory movements of the sufferer are so vigorous as to cause a feeling of pain, pointing to the fact that the reflecting power of the medulla is increased.

We have now to enquire as to the particular agencies concerned in the production of the two principal phases of nightmare, namely, inability to speak and to walk. Perhaps I had better include these, together with other similar phenomena, under the term, loss of control over muscular actions. It has been asserted that this loss of control is due to absence of the co-ordinating power. If, for the sake of argument, I grant this to be true, it would not clash with my theory as hitherto demonstrated. In every case where the actions of the voluntary muscles are co-ordinated, two parts, at least, of the encephalon are engaged, the cerebrum and the cerebellum; and it has been demonstrated beyond all dispute that the power of *will* is lodged in the former, the latter merely fulfilling the mechanical function of co-ordination proper, *i.e.* the distribution of nerve force to muscles intended for combined action. This property,

then, of the cerebellum is simply secondary—it can only be put in action in obedience to a higher authority; the organ is totally incapable of manifesting this species of energy by itself; and consequently, an increase of its blood supply would produce no result in this direction. If, then, the theory of lack of co-ordination be still accepted, we have but one hypothesis remaining, that it is due to the feebleness of the will. Subject to a very considerable modification, I shall strive to demonstrate this as correct. The advocates of the theory of non-co-ordination use the latter word in a purely physical sense. They assume, that the sensations experienced in nightmare are due to the actual inaction of the muscles, and in this they are guilty of the grossest absurdity. What then, I ask, is dreaming? Its very essence consists in imagination—not movement. Dreamers not suffering from the more horrible phenomena of nightmare, walk, run, and speak without moving a muscle. Were the theory I am opposing true, it would logically follow that, if not in all, in at least the vast majority of cases, whenever the sleeper dreams of performing an action the latter must necessarily correspond to the idea. I need hardly say that common experience proves this to be utterly untrue. It is only in very rare cases that action ever follows the impression. In one, when any rational processes are being enacted, men will sometimes speak and laugh. In another, when the sexual passion is excited, the action “*semper eadem*” is probably reflex. But were these cases manifold, instead of few, it would give no man the right to assume that the lack of ability to perform an imaginary action rested in the powerlessness of the actual muscle. Such an assumption, again, would give us an equal right to suppose that, where a sleeper dreams of performing an action, he must be enabled at least in his waking hours to carry his idea into effect. “*Ad reductio absurdum*,” should a sailor whose arms have been amputated above the elbow dream of rowing, his ability to carry out the latter feat cannot be questioned. Yet such dreams in similar cases to the one cited have often occurred. Better let us fall back on Bishop Berkeley’s theory of the non-existence of matter. Further, instances are known of men in whom the cerebella have been diseased, when all co-ordinating power has been actually lost, having dreamt of performing various muscular actions.

I come now to consider the hypothesis of the feebleness of the will as the cause of the imaginary loss of muscular action in nightmare. In the rational processes I have before spoken of, where physical movement follows the idea, there is an evident exercise of the will. In dreams far less horrible than those of nightmare, when the sleeper, lying on his side, is engaged

in imaginary fights, the motive power is put forth—he wishes to hit, and he does so. But the phenomena of nightmare point to an utter absence of will even sufficient to *imagine* a bold muscular action—the sleeper feels himself feeble, helpless, and terror struck. To what, then, can this lack of mental power be due? We know that the will is seated in the cerebral hemisphere. We have seen that the manifestation of energy on the part of the brain is in proportion to its supply of blood. We have seen also that in nightmare there is an increased vascular supply to the back of the brain, and one considerably lessened to its front, the amount of blood increasing from before backwards. We are therefore led to conclude that the will is situated in the front part of the cerebral hemispheres, and that its lack of manifestation, owing to the paucity of material to be transformed into force, is the cause of the imaginary lack of muscular action in nightmare. Further, that the back of the brain is not the organ of will, reason, or exalted imagination, but is the seat of emotions which, when manifested by itself alone, without the controlling power, are ignoble and debased.

ART. VII.—NOTES ON THE LOCALISATION OF DISEASES OF THE BRAIN.*

BY CHARLES K. MILLS, M.D.,

†Neurologist to the Philadelphia Hospital.

THROUGH the observation of patients, conjoined with autopsies, physicians can do something towards solving the problem of the cerebral functions, and my object this evening is simply to introduce the subject of the localisation of diseases of the brain, by the presentation of some notes upon cases, with a few remarks on their import and bearing. For the sake of brevity, unessential details have been left out in reporting these cases, but nothing has been omitted that would affect their interpretation.

My first case was a married woman, aged 41 years. She came under observation four months before her death. Fourteen months before this time she had suddenly become paralysed on the right side. Several years previous to this attack she had had rheumatism. An aortic regurgitant murmur was discovered. It was ascertained that, when first stricken with paralysis, she had some difficulty in deglutition, with positive facial paralysis and aphasia.

On examination, she was found to have slight right facial paralysis, the lower part of the face only being affected. The forehead and eye were not involved. She was decidedly aphasic, but could pronounce a few simple words, and seemed to understand what was said to her. She had well-marked paralysis of the right upper extremity. The shoulder was stiff; the forearm was semiflexed on the arm, and the thumb and fingers were also bent inwards on the palm; but these parts could be straightened by force, only, however, to return again to their unnatural position. The entire limb was a little wasted, and she frequently complained of pain in it. Her right lower extremity showed some loss of motor power, but not the distinct paralysis observable in the upper limb. It was paretic rather than paralysed, and exhibited no contractures. No loss of sensation could be made out. Farado-contractility was good on the paralysed side.

This patient had phthisis, and also, as revealed by autopsy, an inter-thoracic growth, probably carcinoma, and a tumour of the

* Read before the Philadelphia County Medical Society, and has appeared in the *Philadelphia Medical Times*

liver. She died exhausted, suffering much the week before her death, from dyspnoea and pain in her chest and right side.

The autopsy was held eighteen hours after death. No disease of the skull or membranes was detected. An area of yellowish-white softening was found, involving a small portion of the hinder part of the third left frontal convolution, the lower end of the ascending frontal, the entire surface of the island of Reil, and a narrow segment of the adjoining temporal convolution. The substance of the left hemisphere was paler than usual. The left corpus striatum and optic thalamus were normal. No other cerebral lesion was discovered. Slight vegetations were present on one of the crescents of the aortic valve, besides the other lesions to which I have alluded.

The second case was a man, 40 years old, who had had two attacks of paralysis of the left side, from which he had in both instances, in a few weeks, almost completely recovered. The arm and face had been more affected than the leg. Examination revealed a paretic condition of the lower part of the face, on the left side; the mouth was drawn very slightly to the right; the eyes and upper face were unaffected; he had no aphasia. The left upper limb was weak, but he could elevate it to a horizontal line, and perform all movements with it, but not vigorously. Neither arm, forearm, nor hand exhibited paralysis or contractions in distant groups of muscles. The left leg was a little weaker than the right, but that was all. No loss of sensation or interference with the special senses was present. The right side of the body was normal. While under my care he had two local spasmodic seizures, each lasting not over a minute, one involving the left arm and the same side of the face, the other only the lower part of the face. No change in his paralytic symptoms, and no subsequent stroke, occurred, but he died, a week after coming under observation, of what was supposed to be uræmic poisoning.

The post-mortem examination was made nineteen hours after death. The skull and dura mater presented nothing abnormal. The pia mater was oedematous and moderately congested, particularly over the right hemisphere. Anterior to the fissure of Rolando, on the right side, was an arc of distinct softening. It began above, about an inch from the longitudinal fissure, at the border of the fissure of Rolando, extending forwards and outwards so as to involve slightly the posterior extremities of the first and second frontal convolutions, and then bending inwards and backwards again towards Rolando's fissure, the edge of which it reached once more near its inferior termination. The area of softening was irregularly crescentic in shape, and varied in width from one-fourth to three-fourths of

an inch. The inner edge of the crescent and its ends, which were enlarged, were situated in the ascending frontal convolution. The portion of this convolution between the softened space and the fissure of Rolando remained unchanged. The diseased mass had invaded deeply the grey matter, and at each of its extremities had encroached upon the white substance. A small cylinder of the softened tissue reached to the median surface of the brain, about half an inch beneath the convexity. The arc of softening was the only discoverable lesion of the brain.

The lungs were œdematous. A cheesy focus was found at the base of the right lung. Both kidneys were highly granular.

My third case, reported in full elsewhere (*Medical Bulletin*, vol. i. No. 1, p. 13, January 1879), was a man, 66 years old, who for at least eighteen months before his death had had hemiplegia of the right side, with aphasia, the paralysis being most decided in the arm. He had marked loss of sensibility in the right arm, forearm, and hand, and the same condition, but less pronounced, in the right lower extremity. Fourteen days before he died he had two severe attacks of right unilateral convulsions, and a week later he had a similar seizure. His hearing was defective, and he was irritable and emotional.

Post-mortem examination showed destruction, by softening, of the following parts: a small outer rim of the island of Reil; a posterior segment of the third frontal convolution; the lower thirds of the ascending frontal and ascending parietal convolutions; the upper border of the first temporal convolution; the Sylvian border of the lower parietal, and the posterior portion of the upper parietal convolution.

Several examples of what I have supposed to be facial monoplegia have fallen under my observation, but I have not yet had the opportunity of confirming my supposition by an autopsy. In the *Philadelphia Medical Times* for October 26 and November 9 and 23, 1878, is a series of "Lectures on a Case of Facial Monoplegia," by John Guit  ras, M.D., Physician to the Philadelphia Hospital. I had the pleasure of seeing the specimen from the case, which is ably detailed and discussed in these lectures. The lesion which probably caused the partial facial paralysis present was a distinctly defined area of softening, which involved one-inch of the length of the ascending frontal convolution.

The cases here reported may be looked upon as additional evidence that destructive lesions of certain districts of the cerebral cortex cause paralytic symptoms more or less extensive and permanent. They also indicate, from the local spasms occurring in the second case, and the unilateral convulsions in the third,

that a destructive lesion of the cortex may at the same time be irritative, or that it may become so temporarily. In the first case, the aphasia, and facial and brachial paralysis, were due to a lesion of portions of the areas usually regarded as the centres for speech and for face and arm movements. The ordinarily given leg-centres, high up in the ascending frontal and ascending parietal convolutions, were not involved, although the right leg exhibited some loss of power. The transient character of the dissociated hemiplegia, which occurred twice in the second case, is of interest. The cutting off of blood-supply from the lodging of an embolus, in a case of this kind, may, in the first instance, include a larger area than subsequently undergoes softening. The effects of a sudden lesion also probably radiate for a time, for a certain distance, into neighbouring parts. It will be recalled that the paralysis produced in animals by destruction of cortical areas was commonly transient. The arc of softening found in this second case was so situated as to involve only small portions of the general districts or centres for leg, arm, and face. The third case illustrated aphasia and tolerably complete hemiplegia from an extensive destruction of the cortical motor zone. The paralytic symptoms present in this patient resemble somewhat closely those produced by lesions of the basal ganglia. The unilateral convulsions were also similar to those which sometimes result from disease of the corpus striatum. The defective hearing, without disease of the ears, and the marked loss of sensibility, on the paralysed side, especially in the arm, are interesting, from the fact that some physiologists have located sensory centres in both the inferior parietal lobule and first temporal convolution.

I have notes of three unreported cases of hemorrhage into the optic thalamus, in all of which incomplete hemiplegia with hemianæsthesia had been produced. In each case the hemorrhage was large. The anæsthesia in two was pronounced; in one it was slight, and better made out in the arm than elsewhere. No spasmodic symptoms were observed. In one case the crus cerebri adjoining was involved in the hemorrhage, this patient being markedly hemianæsthetic.

In two cases of hemorrhage into the corpus striatum, well marked motor paralysis of the usual type had been exhibited. Anæsthesia was not present, or, at least, could not be recognised. The lower fibres of the facial nerve were partially paralysed; and the paralysis of the arm and leg seemed to me more decided than in the cases of hemorrhage into the thalamus opticus. In one case the clot was confined to the nucleus caudatus or intra-ventricular part of the corpus striatum; in the other, portions of both nucleus caudatus and nucleus lenticularis were

included in the lesion. I give these cases simply because they are additions to actual experience, avoiding lengthy details, as the symptoms observed did not differ from those frequently reported. Recently, however, I presented to the Pathological Society of Philadelphia specimens from two cases of peculiar interest. In one of these the lesion was triple, consisting of a large clot in the right optic thalamus, a small cyst in the right corpus striatum, and a large cyst in the left corpus striatum, the symptoms being left hemiplegia and hemianæsthesia, without right hemiplegia. In the second case a small apoplectic cyst was present in the right corpus striatum, the patient not having been hemiplegic.

In still another case, never before reported, I found softening, involving the entire right island of Reil, a portion of the second and third frontal and of the third and fourth temporal convolutions, where they bound the Sylvian fissure, and two-thirds of the corpus striatum within the lateral ventricle. The symptoms observed during life were mental hebetude, slowness of speech (but not aphasia), dulness of hearing, slightly impaired sensibility on the left side, and general muscular weakness. He was not hemiplegic, as we clinically understand the term hemiplegia. The muscular weakness was a little more evident on the left than on the right side, but he used both arms and both legs with almost equal facility, and no contractions were present.

From a study of these examples of lesion of the great basal ganglia, it will be seen that, while partial destruction of the corpus striatum usually causes typical hemiplegia, such is not always the result. In some instances little or no paralysis occurs. Hemorrhage may occur into the optic thalamus also, without motor paralysis, although in all of my cases more or less complete hemiplegia was present. According to Nothnagel, indeed, lesions of which the thalamus opticus is the exclusive seat are not followed by motor paralysis at all. He also says that it may be regarded as demonstrated that lesions in the interior of the thalamus opticus cause no disturbance of sensibility. (*"Ziemssen's Cyclopædia,"* vol. xii. pp. 148 and 149.)

Both the corpus striatum and optic thalamus are connected by fibres with the convolutions above, and below with the mesencephalon. In addition, a bundle of white fibres, called the internal capsule, is supposed to pass, compressed into a small compass, between the outside of the optic thalamus and the nucleus lenticularis, or portion of the corpus striatum which lies beyond the ventricles in the substance of the hemispheres. It is probable that within this internal capsule are included both

the great sensory and motor tracts which go to and proceed from the convolutions, and it may be, as has been supposed by some, that true paralysis only occurs when the internal capsule is implicated directly or by pressure.

Time will not permit me this evening to go into any lengthy discussion of the various theories of localisation and the question of the real nature of paralysis.

The broad fact that one-half of the body is controlled by the opposite half of the brain is of itself a strong point in favour of the general doctrine of localisation. Cases without number, similar to those given in this paper, have been recorded to prove that paralysis usually appears on the side opposite to the brain lesion. Brown-Séquard's array of opposing cases is, after all, probably only sufficient to show that we may have exceptions to a great rule. This is especially likely, since recent embryological researches have shown that the decussation in the medulla oblongata is variable in character.

The tracts which go to and from the cortex also, doubtless vary somewhat in their directions, and special centres may differ according to the age and habits of the individual.

In regard to the nature of paralysis, my personal experience has not as yet been sufficient to enable me to come to an absolutely satisfactory opinion. With Bastian ("Paralysis from Brain Disease," p. 50), I incline, at present, to think that several explanations may be allowed, in accounting for paralytic phenomena. Some of the symptoms may be due to irritation, others to destruction of brain tissue, and in still other cases, injuries to the brain, besides causing direct symptoms, may produce stimulating or inhibitory effects upon more or less remote parts. I consider it probable, also, that a special form of inhibitory motor paralysis may result from a strongly irritative lesion of portions of the antero-frontal lobes. I reported to the Pathological Society of Philadelphia a case of fibroma, involving the first and second frontal convolutions, and convolution of the corpus callosum, in which the paralysis present appeared to be of the true inhibitory type (*Philadelphia Medical Times*, January 18, 1879). I believe it not unlikely that we will learn to distinguish between paralytic symptoms due to inhibitory action, and those which are the result of pressure or tissue-destruction.

In concluding these brief notes, I would say to those who may question the value of such investigations, that even direct practical results from a study of cerebral localisation have not been entirely wanting. They have been obtained chiefly in the domain of surgery. Thanks to the labours of such men as Broca, Bischoff, Turner, and others, cranio-cerebral topography is now

pretty well understood. The physician or surgeon can determine with considerable precision such points, for instance, as the relations of the fissures of Rolando and of Sylvius to cranial sutures, the superior levels of the great cerebral ganglia, and the situation with reference to external areas of such important convolutions as the third frontal and angular gyrus.

The surgeon's trephine may be guided with greater certainty than ever before to the seat of a lesion. Broca, in 1871, successfully located an abscess of the third frontal convolution of the left side, and reached the lesion by operation. Even supposing the position of an abscess of the brain to be accurately determined, it may be said that an operation might be dangerous or impossible, and I recognise the fact that operative interference would only hold out hope in a limited number of cases. In the matter of organic cerebral affections, however, a little advance is a great gain. Huguenin ("Ziemssen's Cyclopædia," vol. xii. p. 819) mentions an instructive case, in which Renz succeeded, after extracting the blade of a knife, in emptying an abscess which lay deep in the brain by successive introductions of a subcutaneous syringe. The patient was cured. He lived eight years and a half free from all brain symptoms, and died from hemorrhage of the lungs (or stomach?). It is true that in this instance an external opening was present; but it shows the possibility of emptying and healing an abscess deeply situated in cerebral tissue.

M. Proust (*Medical Times and Gazette*, December 16, 1876) communicated to the French Academy of Medicine the case of a young man who had received a bayonet wound on the left side of the head, and subsequently had partial aphasia and incomplete paralysis of the right face and arm, with other symptoms. With the aid of M. Terillon, trephining was performed. The aphasia and arm paresis instantaneously improved. Hebetude, which had been present, disappeared, and the patient eventually recovered. Trephining has been successfully employed in a similar case by another French surgeon, M. Lucas Champonnière, who has given to the profession certain data for determining the "line of Rolando" (*Lancet*, July 7, 1877). Aphasia, monoplegia of the face, arm, or leg, imperfect hemiplegia, limited convulsions, strabismus, and nystagmus, are among the symptoms which can now be successfully employed by the surgeon in deciding upon cranial operations.

In medicine a more reliable prognosis can be given in intracranial affections if we can locate with accuracy the seat of disease. Regional diagnosis also is often a great aid to general diagnosis; knowing *where* a lesion is, we can frequently come to a more satisfactory conclusion as to *what* it is: and thus we

may be able sometimes to discriminate to the advantage of our patients between such conditions as clot, tumour, softening, sclerosis, and meningitis. Mental diseases are becoming better understood; some of them, for instance, being found to be due to lesions of the cortex, macroscopic or microscopic. Circumscribed cerebral meningitis is an affection which cannot always be recognised from the general picture drawn of it in ordinary text-books; but a knowledge of the varying effects produced by the disease, according to the region of the brain covered by the inflamed membrane, will often help greatly to a correct conclusion.

The substitution of one region of the brain for another whose functions have been annulled by disease, through some system of development by training, is a new path in cerebral therapeutics, which holds out some promise, and is an outcome of the study of localisation.

A study of the symptoms produced by involvement of successive districts of the cortex has done much to clear up the mists which have enveloped that interesting affection known as general paralysis of the insane.

ART. VIII.—PSYCHOLOGY OF HAMLET.*

BY THE EDITOR.

"Quem deus vult perdere, prius dementat."

THE mental condition of Hamlet has frequently been discussed, and various interpretations have been given in connection with the subject. Shakespeare intended Hamlet to be a man of passionate disposition, of noble and gentle temperament, most affectionate, devoted to the memory of his father, and indignant at the absence of shame in his mother.

Frailty, thy name is woman !
 A little month, or ere these shoes were old
 With which she followed my poor father's body,
 Like Niobe, all tears ; why she, even she—
 O God ! a beast, that wants discourse of reason,
 Would have mourned longer—married with my uncle.

The play thus commences with a delicate youth, with feelings of grief mingled with disgust, who had doubtless reflected for some time upon a theme which was both repugnant and harrowing to his sensitive nature, and which rendered his mind liable to be unhinged by the slightest provocation. The primary cause for the sudden outbreak of Hamlet's madness may be traced to the appearance of his father's ghost, causing a state of excitement, but calming down by degrees as the vision disappears. The first evidence of his mental aberration occurs in the scene when the apparition has left him and he is asked by Horatio what secret has been divulged—

There's not a villain in all Denmark,
 But he's an arrant knave.

To which Horatio replies—

These are but wild and whirling words, my lord.

This is the first allusion to the wildness and unnaturalness of Hamlet's disposition. Another early indication of his condition occurs in the interview between Ophelia and her father—

My lord, as I was sewing in my closet,
 Lord Hamlet, with his doublet all unbraced ;

* This article originally appeared in the *Medical Press Circular* of February 12, 1879.

No hat upon his head ; his stockings fouled,
 Ungartered and down-gyved to his ankle ;
 Pale as his shirt ; his knees knocking each other ;
 And with a look so piteous in purpose
 As if he had been loosed out of hell,
 To speak of horrors,—he comes before me.

In this scene Polonius alludes to the return of the gifts made by Hamlet to Ophelia as the cause of his madness—

That has made him mad.

In the following scene we find Rosencrantz and Guildenstern, both intimate friends of Hamlet, sent by the King to act as attendants and watch over his personal liberty. From a previous acquaintance with him, it was not to be expected that a suspicion would be cast on the motive of their visit to Denmark and intrusion on his presence. The Queen instructs them thus:—

Good gentlemen, he hath much talked of you ;
 And sure I am two men there are not living
 To whom he more adheres.—
 And I beseech you instantly to visit
 My too much changed son.

There can be no doubt but at this period of the play Shakespeare regarded Hamlet as a madman, driven to desperation by all that he had gone through. A mind embracing both gentleness and firmness, naturally of a strong melancholic temperament, of a highly reflective character, stung to remorse and terror by the villany of his uncle—the murder of his father, and the incestuous behaviour of his mother, all acting as excipients in one already predisposed to melancholy, and prostrating by their baneful influence his mind and producing the condition as described and depicted by the dramatist. Polonius, who was of a crafty and knowing disposition, and ever eager to express his opinion to the King, considered that he had found out the cause for this strange change in Hamlet's mind—

I have found the very cause of Hamlet's lunacy.

Of course he here alludes to the supposed affection for Ophelia, about which, however, there is a diversity of opinion as to whether Hamlet really loved Ophelia or not. He is evidently conscious of his condition, for he perceives that he is being watched by Rosencrantz and Guildenstern and under their supervision, Hamlet asks them a direct question—

Were you not sent for ? Is it your own inclining ? Is it a free visitation ?
 Come, come ; deal justly with me ; come, come : nay, speak.

This remark is made to them in reference to their sudden visit to Denmark. Again—

What have you, my good good friends, deserved at the hands of Fortune, that she send you to prison hither?

It has often been argued from Hamlet's conversation here that he was feigning madness. This, to my mind, is, however, contradicted in the beautiful speech describing his melancholic brooding, which frequently has been brought forward as a typical illustration of a melancholic temperament. Burton, in his "Anatomy of Melancholy," who was a contemporary of Shakespeare's, has also depicted this condition. He writes—

They are soon tired with all things; they will now tarry, now begone; now in bed, they will rise; now up, then they go to bed; now pleased, then displeased; now they like, then dislike all. *Sequitur nunc vivendi nunc moriendi, cupido,*

As Aurielianus says.

Hamlet thus describes his melancholic disposition:—

I have of late—but wherefore know not—lost all my mirth, foregone all custom of exercise; and indeed it goes so heavily with my disposition that this goodly frame, the earth, seems to me a sterile promontory; this most excellent canopy, the air, look you, this brave o'erhanging firmament, this majestical roof fretted with golden fire,—why it appears no other thing to me than a foul and pestilent congregation of vapours.

Suicidal tendencies are always present in connection with melancholia. Shakespeare, mindful of this, introduces in the following scene a speech as illustrative:—

To be or not to be, that is the question.

From the context this evidently refers to the contemplation of self-destruction. The interview between Hamlet and Ophelia, in which she is informed that he never loved her, is characteristic of a mind unhinged:—

O, what a noble mind is here o'erthrown.

His melancholic state gradually subsides into one of sub-acute mania, reaching its culminating point in the scene with the players, where he finds the account given by the Ghost of the murder of his father corroborated:—

Now could I drink hot blood, and do such bitter business the day would quake to look on.

After the interview with his mother and the murder of Polonius, Hamlet is sent to England under the charge of Rosencrantz and Guildenstern, to whose protection he has been entrusted by his uncle—

And he to England shall along with you.

On his return home Hamlet meets the *cortège* bearing the "Fair Ophelia." After this there is no history of any lunacy, and he continues in a sound state of mind until the termination of the play. As a substantial proof of this, I must refer to the speech made by him to Laertes previous to their duel. It is however, to be regretted that this is omitted in the present version of the play. Upon this the whole question hinges as to whether he was feigning madness.

Give me your pardon, sir, I have done you wrong ;
 But pardon't as you are a gentleman.
 This presence knows, and you must needs have heard,
 How I am punished with a sore distraction.
 What I have done,
 That might your nature, honour, and exception,
 Roughly awake, I here proclaim was madness.

He declares further on in the same dialogue that he destroyed Polonius and drove Ophelia to distraction under the influence of insanity. He says that "his madness is poor Hamlet's enemy."

The inference to be gathered from this is either that Hamlet was sane and excused himself on a self-imposed plea of madness, or that he was conscious of his previous irresponsibility, and was eager to explain the reason for his misdeeds.

There is sufficient evidence from a careful examination of the traits in his character to ignore the first plea. Hamlet was not a coward. He would not have made use of deception to escape calumny and disgrace. On the contrary, he was brave, truthful, honourable, and mentally resolute, and I cannot admit that he was a man likely to purposely deceive Laertes. It was contrary to his nature and to the history of his case.

The general conclusion I have arrived at is, that there is no evidence to prove that Hamlet feigned madness, and that, tracing the delineations of his disposition carefully, there are conclusive facts of the existence of mental aberration, followed, as I have shown, by complete restoration to health previous to the termination of the play.

I am desirous of saying a few words on the performance of Hamlet at the Lyceum Theatre. With regard to the portrayal of Ophelia by Miss Ellen Terry, a character so redolent of feminine gentleness, beauty, and grace : It has been argued by

some critics that there is not sufficient acting in the part. It appears to me a most perfect representation of what Shakespeare intended, the personification of a love-sick girl, whose mind is wrecked, giving vent, during her insane warblings, to ideas which could never have suggested themselves to any one but the possessor of a "mind diseased," a mind prostrated and perverted, and to one who had lost control over her better reason, reduced to a state of disordered instinct and imagination. All this is displayed by Miss Ellen Terry. The great error to guard against in a true representation of Ophelia is over action and exaggeration. This is carefully avoided. It is a most difficult thing to feign madness, from the tendency to overdo the part and exaggerate the symptoms. Exception has again been taken to the tears shed in the mad scene as being contrary to what is found in insanity. The now popular notion that persons who are of unsound mind do not shed tears, is a fallacy. It is erroneous and contrary to all experience.

The Ophelia of Miss Ellen Terry is true to nature, and may be pronounced a most brilliant representation. The masterly performance of Hamlet, as rendered by Mr. Irving, is so well known as not to require any further comments from me. The character is depicted with the skill of a consummate artist. I have heard that to produce Hamlet, as it is now acted at the Lyceum Theatre, has been the study of a lifetime, and Mr. Irving must be congratulated upon the great success of his undertaking.

ART. IX.—WHAT CAN BE DONE WITH CRIMINAL LUNATICS?

This man has a code so rigid that scarcely may it be said that he would suffer a maniac to live.—Dr. Hammond, quoted by Dr. Grissom in *True and False Experts*, 1878.

EPIDEMICS may decimate and devastate whole communities, and yet have their uses and advantages. They may remove the useless, the feeble, the aged, the unfittest members, and thus provide a fair and ample field to those most fanciful of modern romancists—the Evolutionists—for producing, or rather growing, young, healthy, powerful, and productive successors. They may exact attention to the circumstances apparently favouring or regulating the spread of diseases, whether these be natural or artificial, quarantine or non-quarantine, local origin or importation, isolation or the new Russian mode of stamping out a plague by burning the villages or houses in which it originated or first appeared. They may excite a paroxysm of domestic, even civic, clearing and cleansing, of establishing new codes of police law, and of initiating a zealous, scientific, and even wise investigation into the laws of health, comfort, and all that promotes individual and general vigour, happiness, and intelligence. The course of moral epidemics presents many features of resemblance to this description. They assail and disturb classes or even races of men; but they chiefly affect the excitable, the erratic, the eccentric, the nervous—all, in fact, whose system is so imperfectly constituted as to be intolerant of strong impressions, physical or psychical, and as to be incapable of resisting not merely the wear and tear of toil, responsibility, disappointment, success, but the light and gentle tenor of a calm and untroubled career. They may rouse legislators and philanthropists to a sense of impending danger, to the possibility of a whole nation becoming frantic, to the necessity of bringing all the forces which politics, religion, or other moral influences place at their disposal, into operation, in order to control or cure the prevalent delirium. They may have led to sustained and permanent efforts to neutralise the effects of vice, intemperance, misdirected education, and of that social deterioration which provokes and aggravates mental maladies; and even to the institution of warnings and recommendations, if not of positive rules, for the prohibition of

consanguine marriages, of trades which are inconsistent with moral or mental sanity, and with the duties and destiny of the citizen, as amenable to the will of God and man. In former times such epidemics were frequent and formidable in proportion to the ignorance, the convictions and superstitions, the habits and manners, and, above all, the dominant temper and temperament of the time. Opinions, fears, fictions, delusions, became epidemic, and swept over Europe, prostrating those of divers lineage, language, and constitution, with a force like a tornado. Perhaps the most striking and instructive illustration of a sentiment becoming universal and unanimous over the hearts and conduct of enormous masses of men is to be seen in the preaching of the early Crusades, when the simple words of an aged priest, "God wills it," animated all semi-civilised Europe, and appears to have forced the actors against their interests, inclinations, and even convictions. In modern times such cataclysms became more rare, more limited in their range, less destructive in their ravages, and, consequently, less effective in the production of social improvements, or, it would be better to say, changes. Very recently we may have observed avarice, fear, fanaticism, widely disseminated, and displaying many of the characteristics of a national scourge; but, in our own day, when a theory, a speculation, a crotchet becomes prevalent, actuates classes or communities, and urges them on to the accomplishment of some common object, the completion of the movement may assume the name and attributes, if not positively the nature, of public duty, patriotism, or philanthropy. Thus there have been magnificent outbursts of popular feeling against slavery, against the unequal operation of laws, and against the modes of interference with, and management of, those who can neither guide nor govern themselves: we allude, of course, in an especial manner, here, to the insane and the imbecile. There have been during the present century repeated instances of a general, if not of a national, outpouring of sympathy and active benevolence—in 1815 and 1847. Far be it from us to stigmatise such manifestations, or to undervalue the incalculable amount of benefit, mingled, it is true, with a modicum of evil and error, which accrued, or may accrue, from such epidemics. But knowing that when such instruments escape from wise and cautious control—as must be the case when large bodies of men act in concert, but without any common principle, in ignorance, and, it may be, from a mere emotion of compassion or indignation, that their operation must be indiscriminate and their influence inutile, or directly pernicious—it may be expedient to offer a few observations rather on what ought to be aimed at than what is proposed to be aimed at on future occasions. The

moment seems to be opportune for such an attempt, as it has become palpable, from the prodromes in many of our widely circulated and most trustworthy newspapers, even from certain of our medical periodicals, and from such sources as conversation and controversy, that the lunacy laws are again to be newly modelled, or muddled ; indeed, it has been reported that certain personages, high alike in legal and medical position and authority, have already been entrusted with the preparation of a programme of intended alterations or modifications. While we would earnestly hope that the opinion expressed by the distinguished President of the Psychological Association, Dr. Crichton Browne, in his address (*Journal of Mental Science*, Oct. 1878)—that our Specialty requires rest and repose—may be realised, it may be prudent to advert to what may be the scope, if not the substance, of the proposed changes, which may be foreshadowed in the address delivered by Mr. Millar, Q.C., in the Social Science Congress in 1878.* This “Daniel come to judgment,” argues that, when lunatics are conveyed to private asylums, the chances of their liberation are in an inverse proportion to the truths of the accusation against them ; that this patient, or victim, as he designates him, cannot escape from his gaolers except by a miraculous combination of circumstances, although he admits that false imprisonment, or the illegal detention of sane persons depends altogether upon tradition and rumour, and that no specific instance can be adduced ; that nothing short of great acuteness on the part of friends and inquirers can compete with the contrivances of gaolers in preventing the real condition of the mind of their charge from being ascertained ; that even Chancery lunatics are ignorant of their right of appeal to the Justices, and are adjudged as of unsound mind on the private evidence of the Visitor ; and, lastly, that the same authority should be appointed to deprive criminals and lunatics of their liberty.

Now, it is not at present our purpose to enter upon any defence of Private Asylums, nor to show that they cannot be dispensed with ; that while improperly conducted establishments of this class probably will be, as they should be, swept away, those under the care of physicians of upright character, extensive experience, and benevolent manners—who can bring all the sources and appliances of ample means, sound medical and psychological knowledge, and all the ameliorations for which we are indebted to modern views, to bear upon those committed to their care—are entitled to the fostering support of the State and of the public for the behoof of that very large number of affluent, cultivated, and refined individuals, who, in this country, would

* *Law Magazine* for November 1878, p. 83.

not and could not be placed in a General Hospital for the insane. Beyond exposing the animus by which the author is governed, we intend here to deal with another branch of his subject, as enunciated somewhat in the following manner. The only circumstances under which no false imprisonment could take place would be by a public inquiry as to the mental condition of the individual, conducted by a jury and judicial officer, or to give the opinion, in his own words, as it is formulated in one of his conclusions:—

“No inquiry into the sanity of an alleged lunatic, whether by a Master in Lunacy or otherwise, ought to be held in private; in order to authorise the detention of any one as a lunatic, such inquiry ought to be public, to proceed exclusively upon sworn evidence, given by witnesses produced for cross-examination, and ought to be conducted by a competent judicial officer, assisted either by a jury or by sworn medical accessors at the option of the alleged lunatic, but in no case acting upon his own judgment merely. The cost of every such inquiry ought to be borne, in the first instance, by the person instituting the same, but he should be recouped out of the lunatic's property (if any), whenever the case was satisfactorily established.”

On pondering this scheme, inchoate and impracticable although it must be under the existing *régime*, regrets may arise that the unfortunate Mr. Dodwell had not been subjected to such a tribunal. But while, with many of our medical, even legal, compatriots, we cannot accept the wild extravagance of firing at a Master of the Rolls, whether with or without blank cartridge, in order to attract attention—foolish and fool-hardy although the act unquestionably was—as a proof of derangement; while many regard the procedure by which this apparently lifelong captive was examined without the protection or persecution of experts, as the case might be, as a misadventure of justice or law; and while we are by no means captivated by the course frequently pursued by experts, or by the practice of resorting to experts at all as at present pursued, we shall not enter into any discussion upon this case. In order to avoid even the appearance of local bias, or prejudice, and to eliminate the possibility of any suspicion that we are contemplating or speculating upon the issue of any special cases in this country, the venue of these observations shall be laid first in another Anglo-Saxon community, and there among a people, and there in a medical school distinguished for its wise as well as ardent pursuit of psychology. In America, Dr. Hammond, who is a physiologist of great energy at least, has advocated views which have not found much favour with his countrymen, as, for example, in discussing un-

provoked murders, perverted affection, and blood thirst, he advocates the punishment of the offender—perhaps on Voltaire's principle, “pour encourager les autres,”—but chiefly on the plea of justice to society, and that he is competent to know the effect of a poignard, a pistol, or garrotting. A very large number of their jurisconsults, especially Dr. Ray, whose work on the Medical Jurisprudence of Insanity is the best on the subject in the English language, advocate a more humane and enlightened course, and would shudder at the possibility of contributing to hang a lunatic by mistake, or because he was dangerous, or in virtue of a metaphysical crotchet. The same authority, while arguing most strenuously that all forms and phases of insanity should be recognised as symptoms of bodily disease, and that the extent to which such conditions may affect the human responsibility should be examined and determined, in the first instance, by medical men alone, offers many perspicuous and prudent objections to the mode in which this investigation is at present applied, and to the circumstances under which the inquiry is conducted. He demurs first as to the selection of scientific witnesses at random. He exposes the hurried and unfavourable circumstances—the cell of a gaol, the eve of the trial, the presence of warders, reporters, friends of the inculpat—under which the most delicate and difficult exploration must proceed. He denounces the custom of Retaining, as the transaction may be called, of hired experts on each side, and to giving *viva voce* testimony in court. He recoils from the cross-questioning, confusing, sometimes brow-beating, of medical witnesses, and all the display of forensic dexterity, which is intended to obscure the subject under consideration or to perplex the jury. While admitting the admissibility of experts in criminal cases, he warns them against system and system-mongers, and likewise against the difficulties and dilemmas suggested to them by counsel. He recommends the avoidance of particular indications; that the whole history, conduct, and conversation of the prisoner should be embraced—even the delicate shades of disposition which can only be detected through long observation of mental and moral disease, in conjunction with a comprehensive knowledge of the healthy mind. He protests against reliance on definitions of insanity, against dealing with supposed cases, solitary symptoms, with the possible identity of crime and insanity, with any consideration except the evidence produced in court, upon which, whatever opinion is formed, should be expressed in scientific and modest terms. As moral insanity is still a *questio vexata*, Dr. Ray advises that it should be avoided.*

* *Medico-Chirurgical Review*, July 1876: “Lunacy in the United States, p. 36. Passim.

Another contribution has recently appeared upon the subject of Criminal Lunacy and its collateral issues, in the form of a pamphlet by Dr. E. Grissom, Superintendent Insane Asylum, of North Carolina. Raleigh, now in circulation amongst us, and which was originally published in the *American Journal of Insanity*. Stimulated by the sanguinary treatment proposed by Dr. Hammond, and by the imminent dangers which threaten the life of an accused person, whether sane or insane, attending the existing arrangements in courts of law, he has written in a strong, forcible, almost bellicose, style; but has presented so important, almost appalling, an array of facts and arguments bearing upon the controversy, that an epitome seems calculated to bring us nearer to the conclusion which we have in view. His preamble is, Chief Justice Shaw, *In the case of Rogers*, defined the principles of expert testimony in the following language:—

“The rule of law, on which this proof of the opinion of witnesses who know nothing of the actual facts of the case is founded, is not peculiar to medical testimony, but is a general rule, applicable to all cases where the question is one depending on skill and science in any particular departments. For instance, an artist is called in, in order to deliver a judgment on a picture, a nautical architect on a ship, in general, it is the opinion of the jury which is to govern, and this is to be founded upon the proofs of the facts laid before them.”

Some questions lie beyond the scope of the observation and experience of men in general, but are quite within the observation and experience of those whose peculiar pursuits and profession have brought that class of facts frequently and habitually under their consideration. “In taxing the present system with laxity and peril, he quotes Sir Fitzroy Kelly as having affirmed that the records of the Assizes show the execution of sixty persons in England during the present century, who are conceded to have been lunatics in the eye of the medical science of to-day.” It is probable that the number cited is a random estimate, an unconscious exaggeration; but it is certain, notwithstanding the principles of humanity and justice, and the precautions “leaning to mercy’s side,” which pervade our code in dealing with criminals of imperfect or impaired intellect, and especially with those who morally stand rather between than on either side of health or disease, that many persons have been sacrificed and others have escaped in consequence of the clumsy and unphilosophical mode of trial in use. In illustration of one of these propositions, he adduces the fate of Bellingham, “a man whom nobody now doubts to have been insane, who committed his homicidal act on the 11th May, 1811, was tried, convicted, sentenced, executed, and his body placed on the dissecting table on the 18th, all within one week.”

And, in order to show that America, where the proportion of criminal to non-criminal Lunatics seems to be 1 to 46·03, or 2·15 per cent.,* has an equally sombre and sanguinary record, he mentions the cases of Cook at Schenectady, of Prescott in New Hampshire, of Baker in Kentucky, or of Maude in New Jersey—a man who had actually been confined as a patient in an asylum and escaped therefrom,—and ironically points to the cases of Cornell and Wilcox, whose sentences being commuted, were confined, the one in Auburn, the other in Clinton Prison, in order to convince the public of the coincidence of insanity with murderous intentions and acts. Dr. Grissom proceeds to assert that the condition of “an insane person” is now, and long has been, a matter of great difficulty. At one time it was held by the courts to be only such an overthrow of the intellect that the afflicted person must “know no more than the brutes” to be exempt from responsibility. As science progressed, the rule has been extended in modern times until it begins to comprehend within its saving influences most of those who, by the visitation of disease, are deprived of the power of self-government. Yet the law, in its slow and cautious progress, still lags far behind the advance of sound psychological knowledge and medical experience. He regards as a glaring and monstrous anomaly that individuals who are not experts—in other words, unqualified by scientific study or observation—are permitted to speak from their personal knowledge as to the mental condition of a prisoner. He contrasts with this rude expedient the practice pursued in France and Germany, where a criminal supposed to be of unsound mind is submitted, as a preliminary step, to a board consisting of experts, or is sent to an asylum, where both his physical and psychical state may be carefully watched, where his hereditary tendencies and personal history can be ascertained, and where all facts connected with his general character and conduct may be expiscated as to whether they are confirmatory or not of the plea set-up. Such an innovation is very desirable, as it appears that, even in America, the functions of an expert have become a marketable and a profitable trade, and that cleverness rather than capacity, or an acquaintance with the diseases of the human mind, are the qualities chiefly in request. But in order to show that such an undignified course may be followed on this side of the Channel, he refers to the petulant remark of a Lord Chancellor, that medical witnesses invariably frame their opinion in harmony with the party from which they receive their pay; but he, at same time, adverts to the extreme caution occasionally exercised in order to restrict the evidence of medical men to facts, to the exclusion

* *Provision for Insane Criminals*, by R. C. Dewey, M.D., 1878.

of mere opinions, and adverts to a trial in which Baron Alderson refused to receive the deposition of a physician who had drawn his conclusion solely from the evidence in court as to the soundness of mind of a panel. And he enforces the illustration by advocating protracted observation in preference to single visits paid for the express purpose of determining the mental health of an accused person. Such prolonged scrutiny is all the more essential, as cases often occur, and have been decided before legal judicatories where derangement was admitted to exist, but where the question at issue was whether the degree of the disease was such as to exonerate from the penalties of the law. It is quite obvious that where trivial or delicate shades of disease, or obscure departures from correct judgment are concerned—where the degrees of aberration are collected and measured by laymen, mingled perhaps with miscellaneous and extraneous matters, and presented, it may be, hurriedly, and for the first time, to an expert, and before he has even seen the panel—there is created a most difficult task, even where great acumen and clinical knowledge can be brought to bear upon the subject—in fact, a dilemma in which the ends of justice may be completely frustrated. Impressed by this conviction, paramount importance should be attached, in addition to signs merely mental, to the history of a criminal: what has been his parentage, education, and physical habits; whether there has been recognised any great physical or moral change in the man, and, if so, whether it has been sudden or gradual; what is his organic condition; and whether trophic degeneration of any character is discoverable; whether hereditary influences indicate hysteria, chorea, epilepsy, syphilitic diathesis, or other profound disturbance of the nerve centres; what inconsistencies of opinion are in sharp contrast with his usual course of belief; whether there are inordinate ideas of grandeur attributed to his personal abilities or interests; whether the bodily functions are performed with regularity, and he enjoys natural sleep; and whether there is that due accord of mental and physical manifestations which long experience has shown to be in appropriate relation to each other in the several forms by which insanity has been recognised, and by which there have been efforts at its classification. Such features are best estimated by the jury when the expert is called upon to deal with theories propounded by the gentlemen of the bar, and when, whatever the amount of perversion, or deviation, there is little more to demonstrate the presence of disease than some affection of the will; for, although alienists may be convinced that whenever the volition is abolished so is responsibility, such is assuredly not the opinions of lawyers. When brought face to face with such subtle and delicate inquiries it

is absolutely necessary that the expert should either have a reputation for familiarity with minute distinctions in psychology to fall back on, or should be able to show, while under inquisition, judgment, ability, and extensive experience. Dr. Grissom mentions, while discussing the *questio vexata*, whether epilepsy precedes or follows insanity, it is mentioned that in the case of an epileptic criminal who had a fit upon the day he perpetrated the homicide, and who was condemned and hung, that structural cerebral changes were found upon dissection. It has been advanced that if deliberation can be demonstrated to have taken place in a lunatic before the commission of a crime, he should be held to be responsible and subjected to punishment. But Dr. Grissom, with every other alienist, has been familiar with many insane homicides who harboured revenge and malice for many years, and who ultimately wreaked their vengeance upon the unsuspecting victim. A person so actuated and endowed with an ordinary degree of reticence or duplicity might defeat the most cunningly devised efforts to expose his morbid tendency, unless these were extended over a long period and conducted by those who were familiar with similar examples of secretiveness. Deeply impressed by the cumbrous machinery at present in operation, and by the great disadvantages under which even the most enlightened and the most intelligent judges and juries labour, Dr. Grissom earnestly proposes that insane criminals should be remitted either to a body of scientific inquirers, or that they should be placed for a considerable time in an asylum where they will be associated with those recognised as deranged, subjected to hourly inspection by philosophical, thoroughly trained, and disinterested physicians, and where every test expedient may be employed in order to lay bare the innermost recesses of their mind, and to analyse and winnow peculiarities, oddities, and suspected delusions. But this wish and hope on the part of the medical profession in the United States has been to a certain extent realised, and has for several years been successfully worked in several states. Dr. Ray is doubtful as to whether medical witnesses should meet for consultation previous to their appearance in court; but this natural embarrassment has been summarily and satisfactorily settled by the Legislature of Maine, which has enacted that persons stated or suspected to be insane are to be examined in an asylum previous to trial by medical men engaged in the study and treatment of alienation, who are not to be selected by the counsel on either side, and whose report is to be accepted in lieu of oral testimony in the witness-box, and in lieu of that partisan contention, and advocacy, and hard swearing, which we are sometimes accustomed to lament, and which is, perhaps, inevitable when medical men are placed in the position of counsel,

and engaged to refute or defend certain propositions, and according to Dr. Ordonaux, and according to many of his class of thinkers, drive a sordid and profitable trade.* In Massachusetts, a commission, including one or more of the asylum superintendents, decides upon the case of convicts, and their removal is governed, it is believed, by the Board of State Charities. These steps are, however, confessedly tentative and experimental, or, at all events, are very limited in extent, and it is now proposed to turn to the results of such a practice in a country where it has received a full and fair trial, and where, after the test of years, it seems to have been crowned with complete success. No attempt will be made to afford either a profound or prolonged, or even a brief or perspicuous, exposition of the law in France upon this subject, nor to draw further distinction or contrasts between what it has effected and what our own system has left untried, or even in the most remote manner imitated; our only object being to show the working of such an arrangement in respect to a few notorious cases as reported in the best known and best credited medical journal of Paris. Such a mode of showing what we regard as a grand and philanthropical movement in advance of what has been scarcely thought of elsewhere, will inevitably be contrasted by our readers with the characteristics, if we dare not say defects, of our English procedure; but we willingly relinquish the invidiousness of initiating the contrast.

I. A.M., one of nine children belonging to a disreputable family, in which no alienation was known to have occurred, had received no education and had entered upon the responsibility of a servant at a very early age. Although she had occupied several situations before she became connected with the family of Serat, nothing peculiar was previously observed in her character, but while so serving, she was accused of having suffocated two children—one an infant, the other 4 years old. . . .

The prisoner, having been transferred from the gaol to the public asylum, gave in both places the same responses to the interrogatories addressed to her, describing in a detailed manner, without any manifestation of remorse, with perfect calmness and as if she were describing a common and indifferent event, the steps and stages of the double murder. . . .

The results of the medical observation were consigned to a report by Dr. Mordret, the medical man of Mans Asylum, of which the following are the conclusions:—

“It cannot be asserted that no sense of moral responsibility existed in the accused when putting the children to death, but it was, at least, extremely feeble. I am disposed to believe that

* *True and False Experts*, by Eugène Grissom, M.D., LL.D., 1878. *Passim*.

she was partially conscious that she was committing a crime, although not fully able to appreciate its moral consequences, nor enabled by the presence of any sentiment in her nature to resist the homicidal impulse under which she acted.

"In my opinion seclusion will be necessary, rather as a measure of public safety than as a punishment."

M. was accordingly condemned by the judge to sequestration until she attained her majority.*

"II. P., the natural child of her mother, assassinated her aunt by striking her with an iron bar, her parent being accused of complicity. Immediately after the perpetration both females were found kneeling before a crucifix in their cottage, the instrument employed having been thrown below the bed. Neither at that time nor subsequently did the daughter express any penitence, pertinaciously asserting that she was impelled by an evil spirit and by a bad motive. During the various legal interrogatories to which they were subjected, the mother and daughter having giving unequivocal signs of derangement, they were ordered by the Procurator of the Republic to be removed to the asylum, where they might be subjected to a more rigid examination. While under medical treatment, when examined together or separately, they adhered to their original declaration, and presented the signs of what Legrand de Saulle has designated the Mania of Double Alienation, or what would, in England, be pronounced the Madness of Supernatural Agency. The results of the legal inquiries and psychological diagnosis were: 1st, that the mother was not present when the murder was committed, but was joined by her daughter in the cottage after the fatal blow was inflicted; but that had she been present, her moral state was so feeble that she could not have been held responsible.

"2ndly, That P., the daughter, labouring under the delirium of persecution, under a consequent irresistible impulse, killed her aunt.

"An *alibi* was proved in the case of the mother; who, having become perfectly tranquil, and able to recognise the real mental condition of her daughter, although retaining the superstitious belief so prevalent among our peasants, was set at liberty; while the daughter, although displaying no hallucinations, was detained as a patient in the asylum on the ground that she is not yet restored to sanity."†

III. The following report contains the whole of the procedure in the case of an individual accused of parricide.

The family of the prisoner, consisting of six members,

* *Annales Médico-Psychologiques*, November 1878, p. 367.

† *Ibid.* March 1878.

appears to have inhabited the country near Mauriac, living in a cottage let to the grandfather of B. The father, a dipsomaniac, and latterly a Dement, was at first secluded for ten years in consequence of furious menaces against his father and children. The majority of the family were labourers, but one was a travelling vendor of umbrellas. The victim had been a drunkard of bad character and cruel, extremely parsimonious, but living on good terms with his grandchildren, the eldest of whom was a drunkard. On the 7th of February 1878, the milk-woman found the deceased lying on the floor of his cottage, with his head almost separated from his body by some sharp and bruising instrument, blood, &c., being observed all around. The wounds and surroundings convinced the neighbours that the murderer had been animated by great ferocity; it was found that a sum of money had disappeared from a press, the key of which was always carried by the old man—a fact showing that the assassin was familiar with the surroundings. Suspicions at once fell upon his grandson, B., who next day avowed himself to be the offender, and that he had stolen 400 francs. The atrocity of the crime, the insignificant temptation, and the previous correct conduct of B., suggested that, if he committed it, there must exist some defect or derangement of the mind, and accordingly medical experts were called in. On inquiry it was found that B. had been a spoiled child, and was well formed and healthy, and that his intelligence was clouded by taciturnity, laziness, and inaptitude. At school he was marked by sullenness and mediocrity. He did not join in the games of his companions, and was scarcely honest, but was regarded as a good boy. Frivolous and apathetic, the choice of a trade was difficult, especially as it was doubtful whether he could enter into the engagement of an apprentice. He was sent to Alsace in order to be taught umbrella making, but his uncle—his master—finding him dull, solitary in his habits, and that neither kindness nor other means effected any change, he was sent back to his parents as incapable. On joining his family, sullenness, idleness, and ill-temper were followed by attempts to poison himself by benzine, and to a priest whom he sent for he merely said the words, “Will God pardon me?”—and to a physician he appeared hebetate, and denied all cause for his crime, except that he was a burden to all, and he was then regarded simply as a suicidal monomaniac. Detected preparing verdigris for a new attempt to destroy himself, he showed such irritability that a certificate of insanity was procured. His relatives deponed at this juncture, to his misanthropy, love of solitude, perfect sobriety and purity of manners, but limited intellect and disgust with his occupation. At this stage he complained of headaches, betrayed great hesitation and restlessness of manners. Rejected for ignorance

by the postmaster with whom he wished to engage, B. re-entered the school of the religious community where he had formerly been a pupil. To the brothers he appeared amiable, timid, and disconcerted by his anticipated failure with the postmaster. He disappeared for a few days, but was quite tranquil on his return home. On the 7th February seemed abstracted, but took food with family, went out to see the hemp dressed, pretended that he was about to carry news from Alsace to his friends, and was seen no more. That evening the crime was committed. Next day he delivered himself to gendarmes a prisoner; confessed himself the parricide, describing minutely the tragedy, and declaring that he was not impelled by a voice or by blood-thirst, but by a sudden impulse which became deeply rooted in his nature. Against this incentive neither legal, family considerations, nor the probable penalty availed anything: he must kill some one, hesitated as to the individual, but his choice was decided by seeing the servant of his poor relative. Entering the cottage, after a few words he destroyed his victim, in spite of cries and supplications, with a hatchet, which he found in the cottage. The theft was an afterthought.

B. was unmoved during this recital. On the eve of the murder he dined in an inn, was eccentric, danced before a mirror, and throughout showed an unimpaired appetite. It is likewise narrated that after the deed he took food at an inn, purchased articles, changing a bill for 100 francs, and stating his name and place of abode.

Subsequently he partook of brandy in several inns until he became drunk. It is obvious, from his inquiries for a carriage, that he intended to go away; but having been told of the death of his grandfather he became agitated, went into the country, and hid himself in a stack of grain in order to avoid the police, and a few hours afterwards gave himself up to their custody, having been heard previously to say that he preferred the guillotine to the temptations to suicide to which he felt himself exposed. In various examinations, he is sometimes pensive, incoherent; sometimes restless, demanding liberation in order to go to Africa; sometimes silent; sometimes talkative, demanding a book of natural history which he had left at home; then avowing his guilt, but declaring his innocence immediately afterwards.

While in prison one of his companions saw him get up during the night, hold his head and move it to and fro as if in pain; to another he acknowledged his culpability, repeated the story as to the sight of the deceased's servant having suggested the crime, and spoke of his grandfather's funeral, his cottage, &c., with but little regret, and seemed to believe that after a detention of eight months he might return to Alsace. The

visit of medical men suggested to him the suspicion that they intended to prove him to be mad, but this he denied. In their presence he was reserved, shy, and worried; when alone, he played like a child. A letter to his friends betrayed the same qualities, demanding food, but indicating no affection and no regret for the act which he had confessed, calling it merely a bad job. His manifestations were so odd and contradictory that he was subjected to the examination of two experts, but their report was so brief and unsatisfactory, that he was ultimately transferred to the prison of Clermont Ferrand, to the more immediate observation of Dr. Hospital, who made the following report:—"B., 19, muscular, head small, flattened behind, forehead contracted, no beard, skin feminine-like; physiognomy childlike and mobile, the aspect suggesting that of a maniac, idiot, or even imbecile; solitary, walks incessantly to and fro, murmurs, as if agitated by internal thought, but obeys mechanically, eats voraciously, and his manners are abrupt and repulsive; his voice and words rude and harsh, and only uttered in reply; is restless and spits constantly; may reply, but incoherently; forgets name and things which no lunatic ever forgets; pretends that grandfather lives, and that he has no knowledge of his death; laughs, murmurs, moves lips, utters irrelevant words when pressed in the most solemn manner; claims prison as his house, beats door in order to get out, is ignorant of several relations; moral impressions faint or null, and on speaking of his fate—of penal servitude, of the scaffold, &c.—no impression was made; reads and writes with difficulty, the latter incoherently. May 20. Insomnia, face haggard, manner more restless, sees in imagination Prussian military in a meadow, evidently a recollection of what happened in Alsace." Under circumstances so complicated and perplexing, the medical experts resolved that he should be transferred to the asylum, where his conduct and conversation could constantly be subjected to examination, and where he would be provided with a guardian more trustworthy than his fellow prisoners.

Pleased to return home, as he thought, by railway, he made no inquiries as to the presence of the gendarmes, entered the asylum without comment, fraternised with inmates of refractory gallery, and took no notice of former medical attendant. Plunged into a shower-bath, with the assurance that it would be constantly repeated until he became communicative, he confessed his crime to the attendant saying that the old man had lived long enough, that he had not thought of the consequences, but knew what he was doing; that no voice or other impulse had prompted the act, and that he had been instigated to simulate madness by some of his fellow-

prisoners. The accused repeated all this to the reporter next day, but with a gay and careless air, promising to tax his memory for additional facts. Engaged in work, he was observed, when alone, to stop, gesticulate towards the sky, and so on, made no attempt; and a letter from home produced no emotion. The following is an account of repeated interrogatories:—

“Q. Having resolved to speak freely, you confess this crime, and recollect its committal?”

“A. Yes. The idea arose two or three days previously on seeing my grandfather’s servant and recollecting the position of the axe. The money had nothing to do with it. The idea returned often. I neither repressed it nor thought of the consequences.

“Q. What was your object?”

“A. As I failed in my business and in self-destruction, I wished to be guillotined.

“Q. Why did you take the money and hide yourself?”

“A. I remembered counting the money, and determined to take a little; then concealed myself; but returned to deliver myself up afterwards.

“Q. Have you recalled the bloody scene in dreams?”

“A. No, never.

“Q. Why have you pretended to be foolish?”

“A. I was advised by two prisoners to act so.

“Q. Are you sorry for it?”

“A. (Speaking as if sorry for a frolic.) Yes. I wouldn’t do it again.

“Q. Have you not thought of the despair or dishonour to your family?”

“A. No. I only thought to carry the idea out.

“Q. On the eve of crime, you visited your father. Had you any accomplices?”

“A. I had no accomplices, and no suggestions from others.

“Q. If desiring money, why not get it from your relative, who had been liberal?”

“A. Money was nothing to me.

“Q. Have you been moved by voices?”

“A. I have never heard voices by night or by day.

“Q. You expected an early discharge?”

“A. I try to be content.

“Q. Have you enemies?”

“A. No.

“Q. Are you a millionaire?”

“A. No.

“Q. Have you no fear of being damned?”

“A. No; never thought of such a thing.”

Considering his previous education, his attempt to escape, his simulation of madness, and that he had a definite object in the murder, a non-medical witness would consider the accused as culpable. Such an observer would regard the act as that of a juvenile malefactor.

After a full consideration of the facts and of the examinations of the accused, the experts have concluded that he is of unsound mind and the act is that of a madman.

To deal with the first proposition: there was one madman and two eccentric drunkards in the family, proving the presence of that most powerful factor, hereditary taint, well marked even in this youthful offender, and which, as is often the case, is not manifested until moral delinquency appears. This element was likewise proved by his ineducability and those various eccentricities which betray a pathological condition in the youthful members of diseased families. Descriptions of such individuals are actual portraits of B. before his crime.

He may be said to have been shipwrecked by his nondevelopment of puberty, and by one of those moral perversions which so often take its place. His symptoms were identical with those which have preceded similar homicides and suicides. The prevention of such outrages must often be attributed to surrounding circumstances, the act being the first symptom of insanity, or may have been preceded by suicidal attempts. Had B. been examined after his suicidal, and before his homicidal attempts, he would have been pronounced insane. Like a child, the deed at once followed the conception, he having gone unarmed. Unprompted by delirium or delusion, the act was impulsive, and may have been long in preparation; the design to kill in order to be killed, the choice of a relation as a victim, and the suggestive sight of the axe, are all proofs of its morbid origin. His cunning in entering by the back of the house coincides with that of many lunatics who ingeniously arrange and combine their plot, which may involve a prolonged and frightful butchery. Thus a pusillanimous child became a relentless murderer, described the deed coolly, and secreted the weapon used; stole, and then concealed himself. If not insane he would have adopted all obvious and ordinary means of concealment and escape, and would not have paid out money, joined his companions, tried to go away, and committed other consistencies. His theft of only part of the money—the property of the family, indeed—was another proof of obscure sense and conscience. As to his concealment, even epileptics fly after crime.

His cold passiveness during confession was a part of his morbid nature. Under supervision in prison, his attitude,

expression, soliloquism, pervigilium, jerking stolidity, were noted as reliable signs, while amnesia was noted as a partially reliable sign of aberration. The confession, extorted from him by the douche in the asylum, that he had pretended insanity by the advice of fellow-prisoners, does not affect his real condition, as many real lunatics have so confessed that they were simulating. His belief in such advice was a sign of credulity, and it is even doubtful whether advice was given.

B. superficially, might appear, while in the asylum, cured, although his cure would probably not last beyond the day of his liberation; but, to the experienced psychologist, his look, his gestures, his murmuring, his cunning expression, even, when he supposed he was unobserved, his indifference towards his mother and to the prospect of perpetual imprisonment, must be regarded as signs of alienation.

The disease may be described as strongly hereditary, innate psychical weakness, weakness of intellect and emotions, absence of moral responsibility and of a conception of the effects of conduct, melancholia, and sudden impulse.

The conclusions arrived at were:—

1. That B. was insane before, during, and after the murder.
2. That his antecedents foreshadow insanity.
3. The first prodrome was his natural character, the second suicide, the third homicide, and the consecutive proofs were the indications detailed.
4. All his symptoms are to be referred to impulsive melancholia.
5. He must be held to be irresponsible.
6. He cannot plead in court.
7. Although ameliorated by seclusion, his disease might break forth anew.
8. He should be placed in an asylum for an indefinite time.

Guided by this report the court issued an *ordonnance de non lieu*, and B. was detained in the asylum, is an assistant in the infirmary, where he attends to the most degraded patients, assists in the most disgusting operations, is humane, silent, stolid; when alone mutters, attitudinises. Has become obese and discoloured during detention.—*Translated and greatly abridged from the "Annales Médico-Psychologiques."* May 1878. P. 388.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

The Localisation of Cerebral Disease: being the Gulstonian Lectures of the Royal College of Physicians for 1878. By David Ferrier, M.D., F.R.S., &c. London: Smith, Elder & Co. 1878.

IT is now about nine years since Hitzig's and Fritsch's experiments first attracted public attention to the question of the possibility of localising the centres of motion and sensation in the cortical structure of the brain. Dr. Ferrier has followed up the researches of these physiologists with untiring industry, and his deductions from experimental, as well as from clinical and pathological observation, have met with the most indiscriminate approval from the leading medical periodicals. That he himself does not feel so confident of the result of his inquiries may be inferred from the following passages from his Lectures:—

“Notwithstanding all the laborious researches and speculations which have been directed towards the elucidation of this subject, we do not seem yet to have arrived at any general agreement, except on a very few propositions, some of these even now contested: a position contrasting strongly and unfavourably with the state of our knowledge respecting almost every other organ and function in the body.”

“It is not very difficult to discover many causes of this obscurity and confusion. Two of these only I will mention as being specially worthy of note.

“1. It may be asserted without fear of contradiction, that as regards the nervous system more particularly, morbid anatomy is far from being co-extensive with pathology. We know, and are every day confronted with the fact, that the most widely abnormal deviations from healthy functional activity of the nerve-centres may be manifested, which leave no trace discoverable by ordinary dissection, or even by any of our most advanced methods of investigation. For the sake of mental satisfaction, we are constrained to speculate on the intimate molecular changes in the nerve-tissues which lie at the root of neuralgia, convulsions, and various other forms of functional nervous disorder; but they are at present matters only of speculation, and lie beyond the sphere of verification.

"2. The organisation and conditions of activity of the brain are such that we are naturally inclined to believe that interference at any one point must necessarily tend to a general functional disturbance. The loosening of a pin in a chronometer, it has been said, will derange the whole time-keeping mechanism, but we should not on that account ascribe time-keeping functions to the one part exclusively. So in all cases of cerebral disease, there is a continual source of doubt as to whether the effects are the direct consequences of the lesion, or merely the expression of general functional derangement.

"And when we examine the actual facts and records of cerebral disease, we find in apparently similar conditions so much diversity, that it seems almost impossible, from a clinical point of view, to separate accidental from essential, to distinguish between direct and indirect consequences, or to determine whether phenomena are related by causation, or are mere cases of juxtaposition or co-existence. Nor do the facts of experimental physiology seem so consistent with themselves, or with the undoubted facts of clinical research, as to inspire us with unhesitating confidence as to their accuracy, or as to their applicability to human pathology."

Dr. Ferrier endeavours to meet these objections by observing, that it is not invariably necessary to prove that organic lesions exist in the localised centres, because their functions are deranged. He then proceeds to state dogmatically, "as an axiom," that when mental aberrations, of whatever nature, are manifested, the brain is diseased organically or functionally. Dr. Ferrier is premature in speaking so positively on this point; there are many eminent psychological physicians who do not subscribe to this dogma, and we would refer our readers to an admirable article by Dr. W. A. F. Browne, in the *Journal of Psychological Medicine* for October 1876, entitled "Problems for Pathologists."

When Dr. Ferrier asserts that he cannot find the slightest evidence to prove that the *same* parts may be destroyed in *both* hemispheres of the brain without producing mental disturbance, and presumes that this is in favour of a localisation of mental *functions*—confounding mental faculties with bodily functions—it is plain that he is not cognisant of all that has been written on the subject, both at home and on the Continent. Dr. Bateman, in his "Darwinism tested by Language," mentions the case recorded by Velpeau, of a patient in whom both the anterior lobes of the brain were destroyed by a cancerous tumour, without his speech being affected. (See *Gazette des Hôpitaux* from April to June 1865.) He mentions another case—one recorded by M. Peter—of a man who fractured

his skull by a fall from a horse, and, after recovering from the initial stupor, regained the power of speech, though after death the two frontal lobes were found to be reduced to a pulp. There is another crucial instance, which we first mentioned in an article on "Materialistic Physiology," in the *Journal of Psychological Medicine* for April 1877. The case was briefly as follows: The patient was admitted into St. Mary's Hospital, suffering from syphilitic disease of the frontal bones. During the week that he was in the hospital, his mental faculties were not impaired, though after death it was found that the anterior lobes of both hemispheres were entirely disorganised. The particulars of the case were furnished to us by Mr. Alfred Eugenius Roche. We therefore think Dr. Ferrier very premature in affirming, as he does at page 94, in reference to the supposed connection between aphasia and lesion of Broca's region, that it "is no longer merely an empirical generalisation, but a *derivative law*, which in my opinion is established on as firm grounds as any other fact in scientific medicine." But we think we have shown that he has not yet proved that the localisation theory is a great discovery, or unquestioned fact, like the circulation of the blood or the reflex function of the nervous system.

Before entering upon the discussion of the clinical and pathological aspect of the theory of localisation, he candidly acknowledges that we are not to expect too much from it, for he says, "but for the aid of physiological experiment, pathology would not even yet have succeeded in arriving at much beyond general indications."

In the motor area Dr. Ferrier includes "the bases of the three frontal convolutions, with those bounding the fissure of Rolands, viz., the ascending frontal, or anterior central (Ecker); the ascending parietal or posterior central (Ecker), with its superior continuation, termed the postero-parietal, or superior parietal (Ecker) lobule; together with the internal aspect of the same, which by our French brethren is generally called the paracentral lobule." Definite portions of the motor area are supposed to have especial influence on the movements of the leg, hand, facial, oral, and lingual muscles of the opposite side.

Dr. Ferrier affirms that after careful investigation he has not been able to find convincing proof of a destructive lesion in the motor area which was not associated with motor paralysis. Brown-Séquard, however, believes that in all cases of paralysis from cortical lesion, there is something that intervenes between the antecedent and the ensuing effect—a sort of inhibitory influence, exercised by the lesion on the centres which are supposed to possess the lost functions.

The greater part of Dr. Ferrier's work consists of detailed, reports of upwards of seventy cases of lesions of the brain extracted from the writings of leading authorities on cerebral pathology, which he thinks support his views; they are illustrated by diagrams, and we recommend them to the attention of our readers. We do not, however, consider them conclusive, but we are far from desiring to check the spirit of inquiry; we only object to the hasty manner in which he has drawn his general inferences. I may mention one instance especially—one in which Brown-Séquard differs from him, the theory of cross-currents. This author enumerates no less than two hundred cases of paralysis occurring on the same side of the brain. With this and innumerable other exceptions, the neurologists should not be quite so indiscriminate in their admiration of the localising theory, as if it were a recognised law. One exception would be fatal to any law, even to the law of gravity. They should take warning from the fate of the theory of evolution, which is falling to pieces under the scientific shots which have riddled it to its very centre.

The conclusion of Dr. Ferrier's work shows that in spite of the confident tone which he has assumed, he has secret misgivings as to the ultimate success of that part of his theory which relates to sensory centres:—

“I have now brought under your notice a considerable number of facts, both positive and negative, in reference to the localisation of special sensory regions in the human brain; and though *the positive clinical evidence is as yet comparatively scanty, and leaves much to be desired*, I entertain the hope and belief that it will not long remain so. And I trust that those who rely more on the evidence of human pathology and the phenomena of disease than on the facts of experiment, even on the most human of the lower animals, and do not therefore share my own very decided convictions as to the localisation of special sensory regions, will take the facts I have adduced into careful consideration, and when opportunities occur, investigate the conditions as to sensation in cerebral disease with rigorous care and exactitude. For only thus are we likely to arrive at a solution of the *doubts and difficulties which still surround this important question.*”

A scientific worker may make a thousand experiments without having the good fortune to make a valuable discovery; therefore, though willingly according to Dr. Ferrier all honour for his industry and genuine love of science, we cannot place him in the same rank with those who have been able to establish a great and general principle.

J. M. W.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN. Vols. xi. xii. xiii. and xiv.

IN the great work edited by Von Ziemssen, four volumes are devoted to diseases of the nervous system. Of the four two are written by Professor Erb; the other two are made up of monographs by various authors. The first of these volumes (the eleventh of the *Cyclopædia*) is on diseases of the peripheral cerebro-spinal system. It is written by Professor Erb alone. It treats of neuralgiæ, anæsthesiæ, neuroses of special senses, neuroses of motor nerves, and anatomical diseases of peripheral nerves.

Neuralgia is handled with great minuteness; and in the section on treatment some valuable remarks are made. The great worth of electricity, rather as a palliative than as a curative agent, is insisted upon. The galvanic current is found of use more frequently than the faradic current. The cases that specially call for this remedy cannot as yet be stated with precision. Those, however, most likely to be benefited are the so-called idiopathic neuralgiæ, and those due to a rheumatic or to a neuritic process.

The various other alterations in sensation are next discussed. Then follows a most readable account of spasms and paralyses. The volume closes with a section on the anatomical diseases of the peripheral nerves—hyperæmia, inflammation, atrophy, and hypertrophy.

The modes of testing sensibility, special and general, and motility are admirable, and will fully repay perusal.

The second of these four volumes (xii.) deals with diseases of the brain and its membranes.

The first essay is on Anæmia, Hyperæmia, Hæmorrhage, Embolism, and Thrombosis of the Brain, by Nothnagel. It gives a very satisfactory account of the subjects it deals with. The next essay is a most interesting and instructive one by Obernier on Tumours of the Brain. Then follow Heubner on Syphilis of the Brain and Nervous System, and Huguenin on Acute and Chronic Inflammation of the Brain and its Membranes,—the latter being an article marked by rare ability both in regard to fulness of matter and lucidity of exposition. The final essay in this volume is by Hitzig. He treats of hypertrophy and atrophy of the brain; and under this latter title general paralysis of the insane is discussed. The account given of it is a very good one—concise, clear, accurate, and full.

The next volume (xiii.), like the eleventh, is written solely by Professor Erb. It comprises diseases of the spinal cord and medulla oblongata. It is characterised throughout

by clearness in stating facts and theories, and by caution in discussing them. Several diseases that are not yet well known to the mass of British practitioners are described in a very readable way. The account of multiple sclerosis, though lacking the vivacity of Charcot's description, is perhaps not a whit less pleasant to read, and is, in some respects, more satisfactory. Spasmodic Spinal Paralysis, first fully described by Erb himself in 1875, having been previously indicated by Zuerck and by Charcot, receives copious consideration. "The disease is *clinically* characterised by a gradually increasing *paresis* and *paralysis*, generally advancing slowly from below upwards, with *muscular tension*, *reflex contractions*, and *contractures*, with strikingly *increased reflex actions of tendons*, while, at the same time, there is entire, or almost entire, *absence of all disturbances of sensibility or trophic disturbances*, of all *vesical or sexual weakness*, and of all *cerebral disturbances*." Such is the author's definition. The affection is slow in development, insidious and chronic in course. The anatomical basis is in all probability a symmetrical sclerosis of the lateral columns, especially of their posterior divisions, advancing gradually from below upwards. The diseases of the medulla, too, are exhaustively dealt with.

The last of the four volumes (xiv.) consists of articles on Vaso-Motor and Trophic Neuroses, by Eulenburg; Epilepsy and Eclampsia, by Nothnagel; Tetanus, by Bauer; Catalepsy, Tremor, and Paralysis Agitans, by Eulenburg; Chorea, by Von Ziemssen; Hysteria, by Jolly; and Disturbances of Speech, by Kussmaul. The last-named essay occupies more than one-third of the whole book, and is one of the most fascinating articles to be found in the work. It gives a masterly account of speech, considered both from a psychological and from a physiological point of view. It will be read with pleasure as well as with profit by all engaged in observing mental phenomena.

Physicians specially interested in neuroses and neuropathology have good reason to be thankful for these volumes.

Insanity and the Lunacy Law. By WILLIAM WOOD, M.D., F.R.C.P., &c. J. & A. Churchill; London, 1879.

DR. WOOD, in his brochure, has come forward to assist the efforts of those who are endeavouring to combat the prejudices of the public against private asylums. His arguments are in accord with the views which have from time to time been advocated in this Journal. It is especially appropriate at this moment, when the most absurd and unjustifiable accusations have been brought against the proprietors of private asylums, and it is high time that they should unite—not as trades

unionists—but as a body of professional gentlemen ready and able to vindicate their honour and integrity, which have been challenged by ignorant and sensational writers for the daily press.

On the subject of the necessity of early treatment in cases of insanity, all alienists will endorse the following remarks of Dr. Wood :—

“Relatives often refuse to believe that the somewhat altered tone of mind in a friend betokens serious trouble, notwithstanding they are told so by skilled observers; they cannot believe that so slight a change can need so stringent a measure as removal to an asylum; they wait irresolutely, till suddenly aroused to the gravity of the situation by some startling manifestation of insanity, and then the opportunity for improvement may be remotely postponed, if it have not gone beyond recall. In a case which came under my notice, certain members of a gentleman's family could not be induced to believe that profuse expenditure, far beyond what had been usual with him, was the first sign of the onset of mental disorder, until he gave an order for a gun the barrels of which were to be of solid gold. . . .

“The liberty of the subject is supposed to include that full liberty of action which is claimed for one who has proved that he is unable to take care of himself, even though it may involve the ruin of all belonging to him as well as of himself. Thus the case is allowed to go on unchecked, until the patient has committed some very irrational act which establishes his mental unsoundness beyond question; too late in many cases to arrest the malady, now deeply rooted in his system; too late, moreover in many instances to prevent irreparable injury to his relatives. In such cases—and there are many of them—the patient's well-being and the family's well-being alike demand early interference and control; too often blind, unreasoning prejudice against restraint steps in to effect the ruin of both, because, in a certain sense, the patient is not dangerous to himself or others. . . .

“It cannot be too earnestly insisted on as of the greatest importance that the popular prejudice against asylums should be in no way encouraged by the legislature; but it is of still greater importance that nothing should be done which tends to disturb and unsettle the patient's mind whilst under treatment to shake his confidence in his medical attendant, or give him the idea that the law looks with suspicion upon the control to which he is subjected. As it cannot be disputed that it is well for insane persons that they should submit to the guidance of others, and that the control which they are unable to exercise of themselves should be exercised for them by others, it is essential that those who are entrusted with this power should be supported, and that those who have to submit to it should be encouraged

to believe that they are in the hands of friends, who will do them justice. . . .

"One of the recommendations of the Select Committee is altogether opposed to this view. I refer to a paragraph in their report in which it is proposed that in all the principal rooms of every asylum a notice shall be put up, stating that any patient is at liberty at any time to write to the Commissioners. . . .

"To some, the imperfect cooking of a potato would be esteemed almost of sufficient importance to address the Commissioners; at any rate, it may be said that scarcely a day passes in an asylum of any size where the threat of an appeal to the Commissioners is not heard. A suggestion that it is necessary to encourage these appeals on account of the probable injustice they are likely to experience at the hands of their legal guardians, would have no advantage to counterbalance the very prejudicial effect it must necessarily have on the minds of many whose chief ailment is perhaps that they are under delusions as to the injury inflicted upon them by their friends and others. . . .

"Whilst speaking of the question of signing the order, I may call attention to one regulation in connection with it which is not unfrequently attended by very great inconvenience. In consequence of one particular case, in which an officer in the army had signed an order for placing a relative under control, not having seen him for a long time, but accepting the responsibility as a positive duty which, in his judgment, he could not with propriety avoid, it was enacted that no person should sign an order who had not seen the patient within a month. This restriction, really valueless as a safeguard, sometimes necessitates a very long journey, for it may be an ailing or aged relative; or it may render it unavoidable to employ some person to represent the relatives who, as in one case which occurred within my knowledge, were resident in a distant colony."

Every proprietor of an asylum will agree in the justness of the following remarks as to the inconvenience often arising from no provision having been made in the Lunacy Acts for applying the income of a patient for his own or his family's use, without a commission. We have known an instance where, in consequence of a patient not being able to sign a document, a relative was subject to great privations. Dr. Wood observes:

"Under the present system great inconvenience arises from the fact that there is no provision made for obtaining and applying the income of an insane patient for the maintenance of himself and his family without a commission. If the income be derived from Government securities or any other investments which require the signature of the investor, it will not be paid

to any other person, and the family may be put to great stress to live, while the expense of a commission if opposed by the patient might swallow up a large portion of the property. It seems reasonable on every ground that some such provision should be made, and the income rendered readily accessible for maintenance. The suggestion of the Select Committee to transfer to the Court of Chancery the administration of property of those unfit to manage their affairs, would not be desirable in recent cases, and in many it would be too costly."

As one means of diminishing the popular prejudice against asylums, Dr. Wood suggests the adoption of a new word for those institutions. The course was recommended in the *Journal of Psychological Medicine* more than twenty years ago. He suggests the word "Sanatorium." We think "Hospitals for Nervous Diseases," or some similar title, would be more appropriate.

Dr. Wood rebuts the insulting accusation which has been made against the proprietors of asylums with reference to their detaining patients longer than is necessary for their recovery. He says:—"Unworthy motives are not attributed to the surgeon who prolongs his attendance on a patient who has broken his leg, and who thinks it his duty to watch and guard against imprudent and premature use of the limb though the bone has united. Why should not a physician in charge of an insane person, and why should not the friends of a patient have the same measure of justice, meted out to them as is without hesitation accorded to the surgeon? A case, illustrating the necessity of caution, lately occurred in which a highly accomplished gentlewoman, who had for several years continued in the same uniform state of mental depression, began to take an interest on what was going on around her; I soon saw reason to fear that a condition was threatening which not unfrequently happens on the occurrence of a sudden change from what had gone on for years, viz. the establishment of a condition the extreme opposite of that which had hitherto prevailed. My warnings were regarded by the friends as over-cautious. Extravagant acts, taking the form of acknowledgments for services rendered during the prolonged period of depression were considered as the natural expressions of gratitude, and the friends considered it their duty to remove the control which up to that time had been maintained over her. The result was most lamentable, the excitement of the life she now led was wearing her out, but she retained sufficient consciousness to appreciate her helplessness, and having escaped from her attendant, presented herself for re-admission in a far worse state than she had ever been before, with small hope of ultimate restoration."

We are at a loss to understand why Dr. Wood should have dragged in the name of the unfortunate Mr. Dodwell as an example of a form of insanity. He is evidently but very imperfectly acquainted with the particulars of the case, and is entirely mistaken in his interpretation of the facts which have come to our knowledge. Dr. Wood thinks that the act of firing a blank cartridge at a judge is a sufficient reason for separating the poor man from his family for life. We would refer Dr. Wood to an article on Mr. Dodwell in the current number of this Journal which we hope will induce him to alter his opinion.

THE BRAIN AND ITS DISEASES.

Syphilis of the Brain and Nervous System. By THOMAS STRETCH DOWSE, M.D. London: Baillière, Tindall & Cox. Vol. i.

THIS little book is a first volume of a series the author proposes writing upon diseases of the Nervous System. He commences by giving a complete account of the history and nature of syphilis. This part of the subject is illustrated by diagrams. He passes on to consider the diagnosis of syphilis as affecting the brain and spinal cord. Dr. Dowse says, very properly, "I would remark, however, that a heavy responsibility rests upon the shoulders of any medical man who neglects to enforce upon his patients the absolute necessity of a mercurial course in the primary stage of syphilis, for an incomplete, hesitating treatment of external syphilis specially predisposes to subsequent affections of the nervous system."

It appears from the book before us that there are two prime factors which tend to induce syphilis to extend itself upon the brain and nervous system. The first, we are told, is an irritable condition of these parts from hereditary predisposition; the second is due to an irritability, the result of inflammatory change, which may be either traumatic or idiopathic in its origin; or from molecular derangement, followed by want of due selective nutritive capacity in the nerve or connective tissue cells, by which their tonicity is impaired. Some very interesting remarks are made on the "protean signs of syphilis of the nervous system." "Syphilis in its working is slow, alternately progressive and retrogressive." A number of characteristic cases are now given, where pressure on the brain and cord were caused by endosteal gumma, as well as by other varieties of syphilis.

The author carefully discusses the diagnosis of the disease

as affecting the sympathetic system, treatment of syphilis, hereditary syphilis, and syphilitic epilepsy, and the pathology of the disease. The work is very interesting, and the plates and diagrams beautifully executed; it is complete in itself, and is well worthy the perusal of all interested in the subject. The production of such a work reflects great credit on the author, and we welcome his book as a valuable addition to the treatment and study of nervous diseases in their relation to syphilis.

INDEX MEDICUS.

We think this an excellent idea and commend it to our readers, and publish with pleasure the following communications we have received on the subject:—

“ 37 PARK ROW, NEW YORK,
“ Dec. 14, 1878.

“ *Journal of Psychological Medicine and Mental Pathology.*

“ GENTLEMEN,—

“The publishers of the *Index Medicus*, in joining the editors in their request for the co-operation of publishers and conductors of journals, would lay stress upon the fact that the enterprise in no way enters into competition with any medical publication, but rather supplements each by furnishing an Index not only to its own subscribers, but to the profession at large. Instead, therefore, of being a new rival in the field, it renders practical, *i.e.* advertising, service, such as is rendered by no journal to other journals. In reciprocation, the publisher would ask simply :

“First, cordial compliance with the request of the editors for earliest copies of your issues.

“The *Index* will be regularly mailed in exchange.

“Secondly, such friendly mention in the reading matter of the journals as may show the enterprise in the light of a useful aid to the profession.

“The specimen number of the *Index* will be sent as soon as issued.

“Yours respectfully,
“ F. LEYPOLDT.”

LITERARY NOTE.—*The following mem. of a new bibliographical enterprise is submitted as of public and professional interest. The publisher would, of course, greatly prefer the insertion of an original notice from the editor.*

F. LEYPOLDT.

It is generally known to the medical profession and those interested in bibliography that Dr. John S. Billings, Surg., U. S. A., in charge of the National Medical Library, at Washington, is now ready to print his great "National Catalogue of Medical Literature," as soon as Congress grants an appropriation for the purpose. This indexes under subjects, and by authors, books, pamphlets, and original papers in nearly all the medical periodicals of the world; including over 400,000 subject entries, and making ten volumes royal 8vo. of 1,000 pages each. This will be of the greatest value to physicians the world over, as it enables them to find analogues for peculiar and difficult cases, and thus often to save lives. In continuation of this work, it is now proposed to publish monthly, under the editorship of Dr. Billings and of his assistant, Dr. Robert Fletcher, M.R.C.S., a current medical bibliography under the title of the *Index Medicus*. It will be issued by F. Leypoldt, the bibliographic publisher, 37, Park Row, New York, at 3 dollars per year, and will enter all medical books and index the leading medical journals and transactions in English and other languages. A full list of the latter, numbering over 600, will form a part of the specimen number of the *Index*, soon to be issued.

PSYCHOLOGICAL ANNOTATIONS.

CRIMINAL LUNATICS.

Two important trials have occurred lately in which the plea of insanity was raised. I allude to that of Madden, tried for threatening the life of the Queen, and acquitted on the ground of insanity; and Mullens, found guilty of threatening the life of an officer connected with the Board of Trade. The nature of the two cases is precisely similar, but the result of the trials diametrically opposite. We have frequently urged that a jury are incompetent to form a correct opinion on the mental state of an individual. Many of the agitators on lunacy reform have stated that previous to the admission of any person into an asylum he should be examined by a jury of his fellow-countrymen. This may appear feasible, but it is quite impracticable and absurd. Every case of alleged lunacy which comes within the province of a jury proves their inability to properly grasp the matter *sub judice*. Guilt or innocence may be determined by them, but not the line of demarcation existing between sanity and insanity. This is proved at every trial in which the plea of insanity is raised. Both the prisoners were certified lunatics, and under confinement in asylums. Madden ought not to have been arraigned in the first instance, having escaped from a lunatic asylum, to which he ought to have been sent back, and not detained as a criminal in a gaol. His mental state was well known, and there was no occasion to waste the time of the Court by deciding a question which was already admitted. In reference to the case of Mullens, we wish to draw especial attention to the rule of law as laid down by Mr. Justice Hawkins in summing up. In commenting, however, on his remarks, we do not want to show any disrespect to a ruling of a judge, but feel it is imperative that some remarks should be made on the subject. Mr. Justice Hawkins is reported to have said as follows:—"It is not sufficient excuse to justify you in acquitting a prisoner on the ground of insanity that he might be eccentric and violent, or that he might have illusions on particular matters." It may naturally be asked, What is Mr. Justice Hawkins's idea of insanity? If an ordinary certificate in lunacy,

required by 8 and 9 Vict., c. 100, was signed, stating that an individual was excitable, violent, eccentric, and laboured under definite illusions, the medical man giving it would be perfectly justified in so signing, and the Commissioners in Lunacy would accept these facts as evidence of the man's mental condition.

Dr. Edgar Sheppard and Mr. Gibson both gave evidence of the prisoner's insanity, but the question reserved for the jury was, whether at the time of writing the threatening letter he knew what he was doing, and the consequences of his contemplated act. The jury found that this was so, and found him guilty. According to the rule of law laid down in our criminal code, a person is amenable to the law of the land if at the time of an illegal act he can discriminate between right and wrong. There is no more cruel or unjust clause in the whole of our legislation than this one. According to it, if a person is ever so insane and yet conscious of this distinction, he must suffer the penalty of the law as it exists. Another point occurs to us in connection with the case. There was no doubt from the medical testimony that he was insane when placed on his trial; and, therefore, we maintain that he was unable to plead, as being *non compos mentis*. One of the last cases of importance in which the accused was not allowed to plead from affirmed mental incapacity was that of the Rev. Mr. Dodwell; and it is not out of place to ask the following questions in reference to this case as compared with the two under consideration: Why was Mr. Dodwell not allowed the services of Mr. Gibson, the surgeon of Newgate, at his trial? This gentleman was in attendance in court, prepared to give his testimony as to his sanity; and this opinion was formed after many lengthy examinations. Mr. Gibson was called in both these cases. Why was Mr. Dodwell—who proved that he knew what he was doing and the seriousness and criminality of his act by the letters written shortly before he fired the pistol at the Master of the Rolls, proving judgment and premeditation—pronounced to be unable to plead in consequence of being considered insane? If the doctrine between right and wrong is considered a test in one case, in the name of justice let it apply to all. On the one hand, a man commits a crime, the jury find that he did not know the seriousness of what he was doing, and consequently, unable to plead, he is acquitted as of unsound mind. On the other hand, as in the case of Mr. Dodwell, an act is premeditated, he is perfectly conscious of what he is doing, he is considered of sound mind by the surgeon of the gaol, but, nevertheless, he is pronounced by the jury as unable to plead. We have heard a great deal lately on lunacy reform; but what is really required is an alteration in our criminal code in reference to the trial of persons alleged to be insane.

BROCA'S THEORY.

Dr. Foulis, of Glasgow, has published in the *British Medical Journal* for March 15, 1879, a case which entirely settles the question of the dependence of aphasia on disease of the posterior part of the third left convolution of the brain. The patient, when admitted into the Glasgow infirmary, was suffering from cardiac dropsy, of which he died. There was no defect in his speech, and he could talk with perfect fluency and correctness. After death the third left frontal convolution was found to be almost destroyed, together with two-thirds of the island of Reil. Dr. Foulis concludes his summary of the case with the following pertinent remarks:—

“The various theories of the localisation of speech have been fully discussed by Mr. Dodds in the *Journal of Anatomy and Physiology*, vol. xii. Dr. Dodds reduces them to three. Of these the narrowest is that of Broca, who places the centre of language ‘always and only in the posterior part of the third left frontal convolution,’ and *à propos* of this, Dr. Dodds remarks that ‘a single complete case of lesion of the posterior part of the third left frontal without aphasia would effectually overthrow Broca’s attempt at exclusive localisation.’ Several cases are on record, in which lesion of the third left frontal existed without aphasia, but to these there are certain minor objections. The case of Batty Tuke appeared at first to overthrow Broca’s views, but it was afterwards ascertained that in the course of that case there had been a period of distinct aphasia. This lends an additional importance to the case which I have detailed above; for in it there is no evidence of aphasia at any time, while the destruction of the third left frontal convolution was so complete as to abolish any function which it may have exercised. It cannot be believed that the thin hollow fragment at the junction of the third left frontal with the ascending frontal could have sufficed to maintain the function of the convolution. I hold, therefore, that the view of Broca is rendered untenable by this case.”

EPILEPSY OF GREAT EATERS.

Three cases of epilepsy supervening on excess in food in persons of sanguine temperament, have enabled M. Lépeire to demonstrate the advantages of blood-letting and spare diet. (*Annales Médico-Psychologiques*, Janvier 1879, p. 133.)

ACTION OF PICROTOXIN IN CONVULSIVE DISEASES.

Dr. Planat has found Picrotoxin useful, and even curative, in idiopathic as well as sympathetic epilepsy, puerperal convulsions, chorea, or diaphragmatic spasm.

Dr. Planat conceives that his success has been such as to justify him in designating the drug an anti-convulsive. (*Journal de Thérapeutique*, publié par M. A. Gubler.)

SLEEPLESSNESS.

1. Sleep is caused by the diminished activity of the nervous cells when they have been exhausted by functional work; these physical conditions modify the vaso-motor innervation; the afflux of blood is diminished, the activity of the brain is suspended, and the reparation of tissue proceeds.

2. The habitual cause of insomnia is the permanent existence of excitement of the central nervous elements under the influence of some cause, whether external or internal; it may likewise depend upon an active congestion of the brain, which maintains the functional activity of the cells.

3. Insomnia may proceed likewise from nervous irritability coincident with general anæmia, producing a modification of the modality of the nervous elements.

4. The treatment of insomnia must depend upon the discovery of its cause. Transitory sleeplessness will almost always be relieved by a return to rigid hygienic laws.

5. The source of pervigilium when symptomatic of acute or chronic maladies can be, in the majority of cases, easily removed by recourse to hypnotics, of which the most trustworthy are opium and its alkaloids.

6. Morphia is the most potent principle of opium; narceine and codeine are less active, but are not followed by the *malaise* which accompanies the use of morphia. The preparations are chiefly indicated in order to allay pain, but are contra-indicated where cerebral congestion is present.

7. Bromide of potassium, which is even less powerful, is indicated where there is acceleration of the circulation, as where wakefulness depends upon nervous agitation, when opiates would be inefficacious. It is employed successfully in children. It is contra-indicated where anæmia is distinctly marked.

8. Sulphate of quinine, like bromide, seems to act in antagonism to congestion of the brain; upon the same principle liquid chloroform is successful in nervous pervigilium.

9. Hydrate of chloral is a new hypnotic, distinguished by its rapidity of action. It is suitable in almost all cases of insomnia, except where dyspnœa, cardiac affections, and great debility are present.

10. The sleeplessness of aged, feeble, anæmic patients will be better counteracted by tonics, bitters, medicaments, wine, and the water cure. (*Archives Générales de Médecine.*)

RHEUMATIC CHOREA.

There is no more connection between chorea and rheumatism than between it, scrofula, syphilis, or skin disease. It is simply chorea—that is to say, a particular state of the functions of the nervous system, under the influence of physical debility, following a malady of some kind and manifesting itself in a want of correspondence between what wills and what executes muscular movement. (*Le Mouvement Médical.*)

EXPOSURE OF SPIRITUALISM.

The tricks of the contemptible delusion termed *Spiritualism* were successfully exposed in the New Public Halls, Glasgow, on the evenings of the 25th and 26th ult., by Mr. Bishop, a young American gentleman, who had just been entertaining and instructing in a similar manner the modern Athenians. Mr. Bishop was invited to Glasgow by the University authorities, who mustered in great force on the occasion of both *séances*—if Mr. Bishop will pardon us the use of the word. The proceeds of both meetings were in aid of the funds of the Western Infirmary. Mr. Bishop was ably assisted in his well-executed and interesting performances by the learned Professor of the University, Dr. Gairdner. (*Medical Press and Circular*, March 5, 1879.)

THE REV. MR. DODWELL.

Justice is not satisfied by the statement recently made in the House of Commons, that medical men have visited Mr. Dodwell and reported that the safety of the public still requires that he should be detained at Broadmoor as a dangerous lunatic. It would not settle the question to say that fifty or a hundred doctors had visited him, if the facts on which they formed their opinion are not published. What is demanded is, that the case should be tried on its own merits.

We will now briefly repeat the facts on which we founded our judgment of his sanity :—

1. That he gave a clear and correct account of the grievances which induced him to commit a misdemeanour, having failed in every other attempt to get a hearing in courts of justice.

2. That he did not fire a blank cartridge at the Judge from an insane impulse, but had been premeditating the act for six months, and was so determined to avoid any possible injury to his Lordship that he stood at a safe distance from him before discharging the pistol.

3. All the medical men who saw him, about six weeks before his being sent to Broadmoor, found him perfectly coherent in conversation, and they could not discover the least trace of a delusion.

4. From all he said it was evident that he was a highly honourable, truthful, and religious man, with strong reasoning powers and a highly cultivated intellect; possessing also great determination of will, and feelings keenly sensitive to insult or injury.

5. It has been assumed that Mr. Dodwell has a morbid sense of his ill-treatment by the Brighton guardians. Can a man be said to have a morbid sense of an injury which has reduced him and his family to beggary?

In conclusion, we would again ask, Why was medical evidence taken in the case of Madden, and not of Mr. Dodwell, at the time of trial? and that if the knowledge of right and wrong be considered a legal test of insanity, why was it not adopted by the judge and jury in passing sentence on the latter gentleman?

Since the above was written, Mrs. Dodwell has presented a petition to the Queen. We subjoin her letter, and the answer which she received from the Home Office :—

“To the Queen’s Most Excellent Majesty,—I have taken the great liberty of writing to your Majesty to make an appeal on behalf of my husband, the Rev. Henry John Dodwell, who is detained during your Majesty’s pleasure at Broadmoor Lunatic Asylum. I humbly submit to the general opinion that he deserved some punishment for his unwise act, but after the long and happy married life we have lived, his uniform kindness to our children and myself, his calmness and perseverance for five years under the irritating difficulties experienced in endeavouring to obtain redress for the wrongs that had been done to him, is not to me consistent with his being branded as a lunatic. And as the eminent medical men who have examined him are divided in opinion, I humbly and earnestly pray that your

Majesty will give him the benefit of the doubt and liberate him, so that he may return to protect our four children and release me from the helpless position I am in, and save me from my only resource, the workhouse.—I beg to remain your Majesty's most humble and obedient subject, ELIZA DODWELL, wife of H. J. Dodwell, 77 Great College Street, London, N.W., 6th March, 1879. To Her Majesty Queen Victoria, Windsor Castle.”—“Home Office, Whitehall, 15th March 1879.—Madam,—In reply to your application to her Majesty, praying the release of the Rev. Henry John Dodwell from Broadmoor Asylum, I am directed by Mr. Secretary Cross to acquaint you that the same has been laid before the Queen, who was not pleased to give any instructions thereon.—I am, madam, your obedient servant (signed), A. F. O. LIDDELL. Mrs. Dodwell, 77 Great College Street, N.W.”

The reply of the Home Secretary is far from satisfactory, and does not meet the exigencies of the case. The public have again and again requested to be precisely informed what are the grounds, both legal and psychological, for Mr. Dodwell's indefinitely prolonged incarceration. The only answer that has been given is, that the medical men who were ordered by Mr. Secretary Cross to visit Mr. Dodwell, reported him to be insane, but the public have never been informed of the data on which they form their opinion. Two medical men, Dr. Forbes Winslow and Dr. Winn, who have repeatedly visited him, and who must be considered entirely independent witnesses, as they have refused any fees for their professional services, have laid before the public a full and explicit statement of their reasons for his sanity.

The *Evening Standard* for March 24, 1879, in commenting on Mrs. Dodwell's petition, observes:—“The plea of the poor lady amounts to this: Her husband did a wrong thing, for which he deserved to be punished; but as to his madness, the best of the experts differ.” * * * “As regards the particular case of Mr. Dodwell, we desire to express no opinion, except that the word insane is sadly in want of a definition, and that, in the absence of a definition, it is only reasonable that men who draw attention to their supposed wrongs by firing pistols at her Majesty's judges are best under lock and key.”

The writer of this remark forgets to state that the pistol fired by Mr. Dodwell was a *lewdless* one, and that his wrongs were *real*, not imaginary. If he is to be pronounced insane from the mere circumstance of his having committed a misdemeanour, it follows that every criminal who commits an assault must be considered mad.

APPOINTMENTS.

- Atkinson, J., M.D., Assistant to the Resident Medical Superintendent of the Sligo District Lunatic Asylum.
- Bateman, F., M.D., F.R.C.P., Honorary Physician to the Norwich Borough Lunatic Asylum.
- Birt, E., L.R.C.P.L., M.R.C.S.E., Second Assistant Medical Officer to the West Riding Asylum, Wakefield.
- Buck, J. S., M.R.C.S.E., Junior Assistant Medical Officer to the Three Counties Lunatic Asylum, Arlesey, Beds.
- Gayton, F. C., M.R.C.S.E., L.S.A.L., Assistant Medical Officer to the Cornwall Lunatic Asylum, Bodmin.
- Jones, D., C.M., M.R.C.S.E., Junior Assistant Medical Officer to the Gloucestershire Lunatic Asylum.
- Kebbell, W., L.R.C.P., M.R.C.S.E., Senior Assistant Medical Officer to the Gloucestershire Lunatic Asylum.
- Outhwaite, W., M.R.C.S.E., L.S.A.L., Assistant Resident Medical Officer to the Lancashire Lunatic Asylum, near Prescott.
- Penman, P. M., M.B.C.M., Assistant Medical Superintendent of the Shirley District Lunatic Asylum.
- Merson, J., M.D., C.M., Medical Superintendent of the Borough of Hull Lunatic Asylum.
- Urquhart, A. R., M.D., Assistant Medical Officer to the Warwickshire Lunatic Asylum.
- Wallis, J. M. A., M.B., L.R.C.P.Ed., Superintendent of the Lancashire Lunatic Asylum, Whittingham.
- Williams, C., F.R.C.S.Ed., Consulting Surgeon to the Norfolk Lunatic Asylum at Thorpe.
- Woods, J. F., M.R.C.S.E., L.S.A.L., Second Assistant Medical Officer to the Somersetshire Lunatic Asylum, Wells.

THE JOURNAL

OF

PSYCHOLOGICAL MEDICINE

AND

MENTAL PATHOLOGY.

PART 2. VOL. V.

NEW SERIES.

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THE JOURNAL
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ART. I.—CHARLES LEVER, M.B., LL.D.

By J. M. WINN, M.D., M.R.C.P., &c.

THE literary fame of Charles Lever had so completely eclipsed his medical reputation, that it was not until the publication of his entertaining biography by Dr. Fitzpatrick * that we became aware of the noble traits he exhibited as a physician during the fifteen years that he practised as a medical man in Ireland and Brussels. A passing tribute is therefore due to the memory of one whom we are proud to number as one of our profession. If he did not distinguish himself by any great discovery in medicine or the collateral sciences, he appears as a high-minded physician, who held honourable and exalted notions of his vocation, and should be held up as a bright example to those who are about to adopt the profession of medicine; for in the present day there are too many who look upon it as a money-making trade, rather than a noble calling. In our reference to incidents in the life of Lever we shall confine ourselves chiefly to the medical aspects of his genius and character.

From Dr. Fitzpatrick we learn that, after making one voyage as surgeon in an emigrant ship, Lever was sent, in 1832, when the cholera was raging in Ireland, with twenty other young medical men, by the Board of Health, to Kiltrush, to assist the local practitioners in the treatment of the epidemic. Lever here showed himself to be a thoroughly practical psychological physician;† for, by his cheerfulness and courageous example, he

* *The Life of Charles Lever*, by W. J. Fitzpatrick, LL.D., M.R.I.A. Chapman and Hall, 193 Piccadilly, London. 1879.

† The supremacy of the mind over the body, and its influence in disease, as well as in health, is a fact which has been fully acknowledged by the wisest physicians in all ages, and one that is not likely to be discredited by Professor Huxley's recent materialistic attempt (in his address to the boys of University

inspired a hope and confidence that were invaluable, and often efficacious when every kind of drug had been found useless. The inhabitants generally were wretchedly poor, and naturally dreadfully depressed at witnessing the fearful inroads that death was making amongst them. It was then that Lever's buoyant spirit acted like a charm. He was never cast down, yet always ready to attend to the calls of the sick poor. In speaking of his services at Kilrush Fitzpatrick observes:—

“Lever made so good a name for himself in treating the epidemic which ravaged Ireland, that he was offered the post of chief physician to a cholera hospital in the west, but he preferred a permanent appointment, if such a thing should turn up.”

The importance of attention to the psychological aspect of cholera was strongly insisted upon by the late Dr. Forbes Winslow, in a pamphlet which he published in 1849, entitled *The Cholera considered Psychologically*. In it he observes: “It is a well-established fact that persons may be exposed for a length of time to the influence of the most virulent contagion with impunity, so long as the mind remains in a fearless, tranquil, and unanxious condition; but if mental depression ensues, the contagion seizes hold of the constitution, and disease manifests itself.”

It was fortunate for Lever's mental and bodily health, and for that of his patients too, that he was able during the hours of relaxation to enjoy the pleasures of society and indulge in harmless practical jokes. Strange to say, these not only justifiable, but praiseworthy recreations, brought down upon him the censure of solemn blockheads and canting Stigginses. With reference to this happy trait in Lever's character Dr. Fitzpatrick observes:—

“Dickens played practical jokes from love of fun, Lever, when jaded by work, resorted to them as a relaxation. The small persecution to which he was subjected by those who condemned his general abandon and enjoyment of passing pleasures, was clearly in his (Lever's) mind when reviewing *Physic and Physicians*.* ‘Nothing is too severe, nothing too illiberal, to be said of the doctor, when, the hours of a painful and laborious day passed, should he either unbend in the lighter amusements of the world, or avail himself of the recreations which to overworked minds are almost a necessity of existence. No, no; we can

College) to exalt the importance of the stomach and lungs. We do not desire to ignore it, but if the cultivation of these organs be the chief object of academic instruction, and if prizes for the best stomach and lungs are thrown open to all comers, it must follow that our ape-relative—a full-grown gorilla fresh from his African home—would distance all competitors.

* By the late Dr. Forbes Winslow.

never forgive the man who has listened to our narrative of gouty suffering or dyspeptic ill-temper, if he be seen the same evening enjoying himself at the opera, or the next morning breathing the free air of the hunting-field.' It has been said that the life of a country doctor is one either of stagnation or overwork, but Lever took care to avoid both Scylla and Charybdis. One of his successors in office told Major D. (from whose manuscript we quote) that 'when he went to Derry, some years later, he found the whole country still full of stories and anecdotes of the wild young doctor who himself performed in Coleraine the feat of jumping over a cart and horse, which he attributes to O'Malley at Lisbon. He is also described as riding backward and forward through the entire night between the bed of some child that was dangerously ill, and a ball given by the officers of a regiment then at Coleraine, and that, too, in his evening dress.' If Lever had studied appearances, and looked solemn while his heart was glad, his purse would have become more fat from fees. . . . Some persons have poohpooched Lever's skill as a physician, but unfairly. Dr. Lytton McIntyre, who succeeded him in dispensary duty at Portstewart, writes: 'Dr. Barr, the oldest medical practitioner now in Coleraine, tells me he knew him well, and he speaks in the highest terms of his medical skill. There is scarcely a resident in Portstewart now who existed in Lever's time. Many years ago I knew several of his friends there, and my impression, from their description, is that he was universally esteemed, and that for his attainments and disposition his society was greatly sought.'"

Lever studied his profession at Gottingen as well as at Dublin, and had the advantage of attending the lectures of Blumenbach. Fitzpatrick gives the account of his first interview with that celebrity in his own words. After ascending the steps of the professor's house, and knocking at a door, with "Herein" inscribed on it, Lever says: "A voice of thunder answered my small knock. I entered, and beheld a small venerable-looking old man, with white hair flowing in careless profusion upon his neck and shoulders. His head, almost preternaturally large, was surmounted by a green velvet cap placed a little on one side. He was grotesquely enveloped in a fur cloak with large sleeves, and altogether presented the most extraordinary figure I had ever seen. I was again roused by the sound of his voice, interrogating me in no less than six successive languages (ere I found my tongue) as to my name, country, &c. &c. I immediately presented my letters and present, with which he seemed highly pleased, and informed me that his 'guter freund,' Lord Talbot, always brought him Irish

snuff; and then welcoming me to Gottingen, he seized my hands, pressed me down upon a seat, and began talking concerning my travels, plans, probable stay at the University, &c. I now felt myself relieved from the awe with which I had at first awaited the interview, and looked around with a mingled feeling of admiration and surprise at the odd *mélange* of curiosities in natural history, skulls, drawings, models, and even toys, which filled the cabinet. But, indeed, the worthy professor was by far the greatest lion of the collection." Lever remarked that the newest English publications reposed on his table, and even some from Dublin. "On standing up to take my leave, I asked him whether the Gall and Spurzheim theories were to compose part of my university-creed course of study; to which he answered, 'No; but if you will wait to October, we are to have a new system broached;' and then chuckling at this hit at the fondness of his countrymen for speculating, he pressed me soon to revisit him and see his collection; and thus ended my interview with the great Blumenbach."

Previous to Lever's going to Brussels in 1833 he had been appointed to the dispensary at Portstewart, having before graduated as B.A. and M.B. at Trinity College, Dublin. Whilst at Brussels he had the patronage of the British Legation, and his professional services were greatly valued by the leading inhabitants. Dr. Fitzpatrick mentions the following curious incident in his practice:—

"A stud-groom of the King of Holland had been under his care for ague. He got well, and on his return to the Hague thought proper to visit his former doctor—the king's physician—to show himself, and to extol Lever's merits. The Dutch M.D. was amazed at what he considered a small miracle, and hearing that the wonderful man who worked it was an author, sent off an express to Bruxelles for Lever's works. They sent him *Harry Lorrequer* and *Charles O'Malley*, and the luckless leech nearly lost his senses at the shock, besides being made the laughing-stock of all Holland, where the whole story was known, from the king downwards."

At Brussels his society was greatly courted, and his hospitable house was frequented by many distinguished guests: amongst them were Sir Hamilton Seymour, the British Minister, Archbishop Whately, and the present Pope. Though he had a considerable medical practice, it was not lucrative, and a great part of his income was even then derived from his writings. *Harry Lorrequer*, which appeared in the *Dublin University Magazine*, was a great success, and Lever found himself so popular as an author that he resolved to abandon the profession and devote himself entirely to literature. He con-

sequently quitted Brussels, returned to Dublin, and became the editor of the *University Magazine*. Although there can be no doubt that the novel-reading public were great gainers by this step, Lever expressed, shortly before his death, his misgivings as to whether it had promoted his own happiness. He said: "Having given up the profession for which I believe I had some aptitude, to follow the precarious life of a writer, I suppose I am only admitting what many others under like circumstances might declare, that I had my moments, and more than mere moments, of doubt and misgiving that I had made the wiser choice; and bating the intense pleasure an occasional success has afforded, I have been led to think that the career I had abandoned would have been more rewarding, more safe from reverses, and less exposed to those variations of public taste which are the terrors of all who live in the world's favour."

Long after he gave up practice, Lever continued to take a warm interest in the medical profession. In 1872 the *Lancet*, in a notice of his death, made the following remarks: "It is but a short time ago that we had to thank him for his able and eloquent vindication of the physician's claims to honours reserved too frequently for merit merely civic or political in its tenour. So that, while mingling with that of the general public our tribute of regret at the loss of so bright a literary benefactor, we shall add another and a more poignant one for the premature extinction of a true friend to our profession, an ornament to it in his early years, and its vindicator to the last."

During his editorship of the *Dublin University Magazine*, the journal attained an extensive circulation, mainly due to the original contributions which flowed incessantly from his fertile imagination and facile pen. Scattered throughout the miscellaneous articles in the journal we find passages of profound and serious thought. Though no anchorite, it is easy to perceive, too, through the atmosphere of his jovial mirth, glimpses of the highest medico-psychological aspirations; and, like the generality of our brightest geniuses, he had no sympathy with heartless infidelity or cold-blooded materialism. We quote the following passages in confirmation of what we have stated:—"The medical man is more than any other met by facts, whose tendency is directly the opposite [to atheism]. The recognition of the Creator in His works is to him the daily study of his life. Those powerful arguments which natural theology, as it is called, possesses, are to him more available, for the experience of his profession teems with them; and even where with the unmedical world the evidences of truth end,

to him a new chapter is opened. To the evidence of design alone his belief is not limited; he is called upon by the study of his art to recognise a still higher attribute—the Providence of God. . . . There is scarcely an accident of our lives, however slight, scarcely a malady which flesh is heir to, so trivial, that would not, in its consequences, involve our very existence itself, were there not inherent in our bodies some antagonism to disease and death, by which our preservation is accomplished.” These remarks were penned in 1839, when he was comparatively a young man, and show that it was not merely when he was broken down by trouble and disease, as his warmly attached friend and amanuensis, Mr. Stephen Pearce, supposed, that he had times of graver thought. Canon Hayman bears a similar testimony. “Poor Lever; none sooner than himself would admit his foibles and failings. Let us hope and believe, with his kind amanuensis, that sorrow brought him higher and better things; and I myself possess knowledge, hidden from Pearce, that under that wild levity, sober and sacred thoughts were not unfrequently concealed.”

To Mr. Pearce we are indebted for the following graphic notice of his genius and virtues:—“It was all dash and go up to the highest pitch possible, with, I think, not much thought of the future; though in purity of morals he was certainly *sans reproche*.”

We have dwelt thus much on the moral aspects of Lever’s character, because in a recent review of his life the writer has ungenerously placed all his failings in the strongest light, and passed unnoticed his noble and redeeming qualities.

In estimating his character, it must never be lost sight of that he was intensely Irish, and his merits, as well as his shortcomings, were eminently Celtic, and must be judged accordingly. Although he frequently showed carelessness of his own interests, he never stooped to literary charlatanism; and though his society was courted in the most brilliant circles, yet—unlike the generality of convivial wits—he continued to be the idol of his home circle, and was a devoted husband and father.

Lever was much gratified at receiving from the University of Dublin the honorary degree of Doctor of Laws at the time of his last visit to that city. This induced him to resume the title of Doctor, which he had for many years abandoned. He attributed much of his knowledge of human nature to the peculiar advantages which a physician enjoys in the daily intercourse with his patients. He observes: “The life of a physician has nothing so cheering, so full of hearty encouragement, as the occasional friendships to which it opens the way. The doctor attains to a degree of intimacy, and stands on a footing of

confidence so entirely exceptional, that if personal qualities lend aid to the parties, his intercourse becomes friendship. Whether, therefore, my old career gave me any assistance in new roads, whether it imparted to me any habits of investigation as applicable to the full, to morals as to matter or not, it certainly imparted to me the happy accident of standing on good terms with—I was going to say my patients—and perhaps no better word could be found for one who has heard me so long, trusted me so much, given me so large a share of his favour, and come to look upon me with such friendship. . . . He, who to-day is the confidant of his king, and to-morrow leans over the sick bed of the starving tenant of a garret, must needs see life in various aspects; and it would be to deny him powers that his very position demands, not to confess that, to him more of the romance of life is presented than to any other man.”

There can be no question that Lever had many of the attributes of genius. He had great powers of observation, and possessed that peculiar faculty conspicuous in great geniuses—that of vividly seeing as if in a picture the scenes which he described. Dickens not only saw the scenes he described, but also heard distinctly the words uttered by his imaginary characters, and his account of this fact led the late G. H. Lewes to suppose that these vivid conceptions were the product of insane hallucinations! Forster, in his *Life of Dickens*, has effectually exposed the fallacy of this notion. Byron said that his poetical images came before him without any effort of his own, as if they were objective, when they were really subjective. Sterne also, in *Tristram Shandy*, very drolly alludes to the same sort of faculty, which he calls catching ideas. He says: “I look up, catching the idea, sometimes even before it half reaches me. I believe in my conscience I intercept many a thought which Heaven intended for another man.”

The earlier works of Lever, like Marryat’s, will ever delight those who are in the heyday of youth, and the perusal of his military stories has doubtless been the means of leading many an ardent youth to become a dashing dragoon, just as Marryat’s sea novels have added many a gallant lad to the navy. It is, however, on Lever’s later works, when his style became serious and philosophic, that his literary fame will chiefly depend.

Dr. Fitzpatrick’s Biography of Lever abounds in racy anecdotes, and descriptions of the originals from which he drew his characters, and its perusal will furnish a pleasant recreation in “Hours of Idleness.”

ART. II.—NOTES ON THE PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

By J. G. DAVEY, M.D., Bristol.

THE title of this paper may lead many to anticipate the object I have in view in its composition. It is in great part to call the attention of my medical brethren to the respective labours of Drs. Hughlings-Jackson, Ferrier, and Brown-Séquard. Many are aware that the gentlemen named enjoy the credit of having added not a little to our knowledge of cerebral physiology and pathology; it is, however, a source of regret that teachers of medical science of such recognised ability and of so high a reputation should be found the advocates of opinions so very antagonistic or contradictory as are those of the two first named, when contrasted with Dr. Brown-Séquard's published views on the same subject. The "localisers," as Drs. Hughlings-Jackson and Ferrier are named, would seem to this present time to enjoy the larger amount of support or credit; whilst Dr. Brown-Séquard's "inhibitory" theory is comparatively considered nowhere. I hope to prove by the following remarks that it is more than probable, the largest amount of physiological and pathological truth is to be found away from or outside the teachings of each, or of all, the three gentlemen here named. Dr. Hughlings-Jackson, it is well known, has made his mark in the profession by an attempt to localise the abnormalities of the brain; to assign to the morbid changes of its several parts certain and specific signs and symptoms. His theory of "discharging lesions" as well as of temporary and permanent organic changes occurring to the cerebral mass and its several parts—with their individual outward signs or symptoms, as seen in epilepsy, tetanus, chorea, &c.—his theory (I say) is well known, and accepted, in great part, by the profession. Let me add that the pathological investigations of Dr. Hughlings-Jackson and the experiments of the Ferrier school have this one feature in common—viz. both or all such (investigations and experiments) are designed and prosecuted with the view to demonstrate the sure and certain *localisation* of both the motor functions of the brain—as well as of those several morbid changes occurring to this same organ, the presence of each one of which is said, as has just been stated, to be indicated in an especial manner by well-marked signs or

symptoms. Many recent writers have expressed themselves in the strongest terms in favour of Dr. Hughlings-Jackson's pathological doctrines; and many more have conceived a marvellous affection for the vivisections of Dr. Ferrier and their results; and these results the press, both general and medical, has declared to be "the greatest scientific discoveries of the present age," and to have surpassed in importance "all preceding knowledge." Dr. Carpenter, the long-continued opponent of Gall and Spurzheim's "localisation" teachings, is now constrained to accept, with even much laudation, the "data" of Broca, Hughlings-Jackson, and Ferrier, in so far as *aphasia* is concerned. The "admirable experiments" of the last-named he (Carpenter) affirms have afforded some reason to believe in the "localisation" so long and persistently denied by him, and that the time is now come to "modify" or "abandon" his former and long-cherished antagonism to Gall, Spurzheim, and the Combes. As before intimated, Dr. Brown-Séquard has put himself in a position of direct hostility to the teachings of both Dr. Hughlings-Jackson and Dr. Ferrier, and this being the case it is surely expedient, if not essential in every way, to ponder closely and well the relative claims of the gentlemen named on that profession of which they are, in any case, eminent and much-honoured members.

Now Dr. Hughlings-Jackson affirms: (1) That the researches of Ferrier demonstrate the truth of what he has long urged on his medical brethren, that "discharges of convolutions" develop movements as in epilepsy. (2) That the proximate cause of epilepsy, as of the movements seen in chorea, is located in the gray matter of the convolutions. That the epileptic convulsions and the choreic twitches are "one of degree rather than of kind" "having the same centric causation." (3) That hemiplegia, "hemi-chorea," "hemi-spasm," and "hemi-contraction" (a mixture of palsy and spasm) are each one and all located in the corpus striatum. (4) That disease located in the right hemisphere is indicated by symptoms affecting the left side of the body and *vice versa*.

The following are among the conclusions of Dr. Ferrier, as given by him in Vol. iii. of the *West Riding Lunatic Asylum Medical Reports* (1873).

1. The anterior portions of the cerebral hemispheres are the chief centres of voluntary motion and the active outward manifestation of intelligence.

2. The individual convolutions are separate and distinct centres; and in certain definite groups of convolutions and in corresponding regions of non-convoluted brains, are localised the centres for the various movements of the eyelids, the face, the mouth (and tongue), the ear, the neck, the hand, foot, and tail.

3. The action of the hemisphere is in general crossed; but certain movements of the mouth, tongue, and neck, are bilaterally co-ordinated from each cerebral hemisphere.

4. The proximate causes of the different epilepsies are, as Dr. Hughlings-Jackson supposes, discharging lesions of the different centres in the cerebral hemispheres.

It is added: "The affection may be limited artificially to one muscle, or group of muscles, or may be made to involve all the muscles represented in the cerebral hemispheres, with foaming at the mouth, biting of the tongue, and loss of consciousness. When induced artificially in animals, the affection as a rule first invades the muscles most in voluntary use, in striking harmony with the clinical observations of Dr. Hughlings-Jackson."

5. Chorea is of the same nature as epilepsy, dependent "on momentary (and successive) discharging lesions of the individual cerebral centres. In this respect Dr. Hughlings-Jackson's views are again experimentally confirmed."

6. The corpora striata have crossed action and are centres for the muscles of the opposite side of the body. Powerful irritation of one causes rigid pleurosthotonus, the flexors predominating over the extensors.

7. The optic thalamus, fornix hippocampus major, and convolutions grouped around it, have no motor signification (and are probably connected with sensation). "These results," he adds, "explain many hitherto obscure symptoms of cerebral disease and enable us to localise with greater certainty many forms of cerebral lesion."

I will now look at the same picture from a new standpoint. Referring to the "localisers"—(this is Dr. Brown-Séquard's own word)—it is affirmed that their views are untrue and contradicted by facts. Dr. Brown-Séquard denies: (1) The existence of parts on the surface of the brain deserving the name of motor centres. (2) The assertion of Todd and Carpenter, backed though it is by both Hughlings-Jackson and Ferrier, that the corpus striatum is, in any sense, a motor centre; and certainly not for both the arm and the leg.

In so far as the corpus striatum is concerned, Dr. Brown-Séquard adds the following highly significant remarks—viz:—"Given disease of the corpus striatum, you may or may not have paralysis of either the arm or the leg, or both. Given the complete destruction of the corpus striatum, then there may not necessarily be any paralysis of either a leg or an arm."

It is concluded by Dr. Brown-Séquard that even in diseased states of the corpus striatum where the paralysis is found, then is it due to an "irritation producing on distant parts an inhibitory influence." Dr. Semple, in an article contained in the *Journal of Psychological Medicine*, tells us, what, indeed,

the preceding remarks seem to justify, "That Dr. Brown-Séquard, who has perhaps done more than any living investigator to localise the functions of the brain, now publicly announces that his own previous results have proved fallacious, and that the brain acts as a whole and not by the separate agency of its individual parts. . . . That there is no necessary relation between the seat, the extent, the kind of cerebral lesion and the symptoms that may appear from its influence." Dr. Brown-Séquard's propositions are in short these: (1) That a lesion in one half of the brain may produce symptoms either on the opposite or on the corresponding side. (2) That a very small lesion, whatever be its seat, may produce most violent and extensive symptoms. (3) That a lesion occupying the same extent on the two sides of the middle line of the brain may produce symptoms only, or chiefly, on one side of the body. (4) That symptoms may proceed slowly from a suddenly produced lesion. (5) That symptoms may appear suddenly from a slowly and gradually developing lesion. (6) That the greatest variety of symptoms may proceed from a lesion in the same part of the brain. (7) That the lesions of the most various parts of the brain may give rise to the same symptoms. (8) That permanent lesions may produce symptoms by attacks just as they produce epileptiform seizures. (9) That symptoms may cease suddenly or rapidly, notwithstanding the persistence of the lesion. (10) That symptoms of brain disease may appear from irritation of visceral and other peripheric nerves. (11) That considerable lesions anywhere in the brain may exist without the appearance of any symptoms." Now, there is, as I believe, a way, and but a single way, by which we have it in our power to escape the dilemma into which Drs. Hughlings-Jackson, Ferrier, and Brown-Séquard place us. There is no help for us but to accept, as we are bound to do sooner or later, the physiology of the brain as taught by Gall and Spurzheim. To this we must come or forfeit our claims to rank as physiologists. Physicians and surgeons of whatsoever rank, or of no kind of rank, may continue to call *phrenology* "rot," and to laugh at it—may pretend to scorn those who have devoted the years of a fairly long medical life to its investigation—but the *truth* will live, will have its due. Do we accept the doctrine of progression, of evolution, and fail to attach to it the inevitable conclusions? Do these not demonstrate *bonâ fide* that the brain of man—so ample, so wonderfully contrived, so exquisitely protected, so well nourished as it is—*must* execute offices in the animal economy of the most important and indispensable kind? Strange indeed it is that this marvellous structure (the brain), these cerebral hemispheres in man—the crowning points, as they

are, in his organism—should at this day be so much dis-associated with their true and normal functions, so much denied their fair and very legitimate offices in the animal economy! The functions of the brain's cortex are not yet estimated as they should be, and the consequence of the many false and mischievous views taught in connection with its physiology is simply this—its pathology is seriously at fault. We are taught by a host of the best men of the day that our knowledge of this complicate nervous system of ours has been reached by degrees inconceivably small. From the zoophyte to man we see a gradual increase of parts, a slow yet sure amplification of nervous structure. Is not the embryo life of a given animal the index, the type, of all beneath that animal in the scale of living beings? Are we not assured that the perfect brain of man has in its mode of growth—its accretion and development—assumed in due order of sequence so many temporary states of being, each one of which is the representative of the permanent type of the lower forms of life, as seen even in fishes and reptiles, to say nothing of birds and mammals? Is it not taught in our schools that nature starts from the most simple to reach the most complex, and exhausts, as it were, the structure of all other animals before she arrives at her *chef d'œuvre*—man? Now, in what consists this the grandest achievement of nature's laws?—in what, but the development or creation in the *genus homo* of the anterior and superior cerebral lobes, the superadded instruments of altogether new functions—functions which, being altogether mental, i.e. of an intellectual and emotional nature, and not concerned else than sympathetically, so to put it, in the lower or merely animal movements—the automatic or excito-motory phenomena—can have but a very secondary relation to the morbid phenomena which belong to epilepsy, tetanus, chorea, and so on? From this point of view it is not possible to connect as cause and effect the diseased conditions found in the hemispherical ganglia (Solly) with the convulsive and nervous disorders named. The labours and discoveries of not only Gall, Spurzheim, and the Combes, but of Marshall Hall, Granger, Mayo, and many more, seemed threatened by something like an extinction; there appears a danger lest such labours and such discoveries may lose their fair and legitimate hold on physiologists. The long known and accepted plan and arrangement of the nervous system in man and in mammals, as well as its acknowledged varieties and functional endowments, are sought now to be shrouded by experiments of a character at once so startling and damaging, that one is driven to claim the privilege of questioning the views advocated so persistently by Drs. Hughlings-Jackson and Ferrier. In fact the

mere presence of primary "motor centres" in and about the convoluted surface of the brain would of necessity disarrange all our accepted ideas of the anatomy and physiology of the cerebro-spinal system, as such are handed down to us; and which ideas bear the impress of a form of truth not to be shaken by a series of vivisections on the lower animals—vivisections at once unnecessary and cruel. To insist on "motor centres" forming parts of the "hemispherical ganglion" is to give a denial to the teachings of our most accomplished investigators: teachings which are to the effect that the conscience in man and many animals—or what is the same thing, though more practically rendered, the intellectual powers and the higher emotions or affections of our nature—are located in the brain proper—that is to say, in the anterior and superior cerebral lobes; whilst the sentient or mere animal endowments are the outcome of the cerebellum medulla oblongata and the parts adjacent: and what is more, that these higher and lower planes of nervous matter are united from above downwards by the peduncles of the cerebrum, and from below upwards by the inferior peduncles of the cerebellum. No one can doubt the perfect adjustment of those several parts of the cerebro-spinal organism, and their several yet mutually dependent uses in the animal economy—in other words their functional entirety or completeness. The attempt to enrich the superior or convoluted brain surface, already so well provided with an especial force of its own, at the expense of the base of the encephalon and the medulla &c., to the integrity of which we owe the excito-motory phenomena, must and will come to grief. The position here insisted on is of the first importance; and such being the case I will venture to quote here the words of the late Dr. J. Hughes Bennett, as found in the article "Physiology" in the *Encyclopædia Britannica*. He writes thus: "By cerebrum or brain proper ought to be understood that part of the encephalon constituting the cerebral lobes, situated above and outside the corpus callosum; by the spinal cord, all those parts situated below this great commissure, consisting of the corpora striata, optic thalami, corpora quadrigemina cerebellum, pons varolii, medulla oblongata, and medulla spinalis." In this way, he adds, "we have a cranial and a vertebral portion of the spinal cord In the cerebrum, or brain proper, the ganglionic or corpuscular structure is external to the fibrous or tubular. It presents on the surface numerous anfractuositities whereby a large quantity of matter is capable of being contained in a small space; this crumpled-up sheet of gray substance has been appropriately called the hemispherical ganglion (Solly). In the cranial portion of the spinal cord, the gray matter exists

in masses, constituting a chain of ganglia at the bases of the encephalon, more or less connected with each other, and with the white matter of the brain proper above, and the vertebral portion of the cord below. In this last part of the nervous system the gray matter is internal to the white, and assumes the form of the letter X, having two posterior and two anterior cornua—an arrangement which allows the latter to be distributed in the form of nerve tubes to all parts of the frame. Further, the brain proper furnishes the conditions necessary for the manifestation of the intellectual faculties properly so called, of the emotions and passions of volition, and is essential to sensation. That the evolution of the power especially connected with mind is dependent on the hemispherical ganglion, is rendered probable by the following facts: (1) In the animal kingdom generally, a correspondence is observed between the quantity of gray matter, depth of convolutions, and the sagacity of the animal. (2) At birth the gray matter of the cerebrum is very defective; so much so indeed that the convolutions are, as it were, in the first stage of their formation, being only marked out by superficial fissures almost confined to the surface of the brain. As the cineritious substance increases, the intelligence becomes developed. (3) The results of experiments by Flourens, Rolando, Hitzig, and others, have shown that, on slicing away the brain, the animal becomes more dull and stupid in proportion to the quantity of cortical substance removed. (4) Clinical observation points out, that in those cases in which disease has been afterwards found to commence at the circumference of the brain and proceed towards the centre, the mental faculties are affected *first*; whereas in those diseases which commence at the central parts of the organ, and proceed towards the circumference, they are affected *last*. The white tubular matter of the brain proper serves, by means of the diverging fibres, to conduct the influences originating in the hemispherical ganglion to the nerves of the head and trunk,” including of course the extremities of both man and beast. “The spinal cord, both in its cranial and vertebral portions, furnishes the conditions necessary for combined movements; and that the nervous power necessary for this purpose depends upon the gray matter, is rendered probable by the following facts: (1) Its universal connection with all motor nerves. (2) Its increased quantity in those portions of the spinal cord from whence issue large nervous trunks. (3) Its collection in masses at the origin of such nerves in the lower animals as furnish peculiar organs requiring a large portion of nervous power, as in the triglia volitans, the torpedo silurus, &c. The white matter of the cord acts as a conductor, in the same manner that it does in the

brain proper, and there can be no doubt that the influence arising from impressions is carried, not only along the fibres, formerly noticed, which connect the brain and two portions of the spinal cord together, but along those more recently discovered, which decussate or anastomose in the cord itself (Brown-Séquard), and are connected with the ganglionic cells of the gray matter." We see then that, according to Bennett, the cortex of the brain proper must be held to be the starting point of not only those powers or faculties called intellectual, but also of those essentially moral in their operation, that is to say, of our affections or feelings or emotions and passions. But of these we learn nothing from Ferrier, so far as his teachings have yet reached us. The hard and thoroughly practical labours, the ever famous discoveries, of Gall, indicated as these are in the words of Bennett just quoted, cannot, must not, be so shelved, so ignored, as some among us would have them. However, Bennett was but one of the many who in a time gone by gave good and earnest support to the first principles or groundwork of the phrenological school. To come down to this present time, we find Dr. Maudsley helping on the good cause of a sound psychology, and lending his aid to uproot or to get rid of the wild fancies and vain imaginings of the metaphysicians or immaterialists; and whilst doing this much we find him also putting a drag, and a sound one too, on "the teachings of Dr. Ferrier himself." But I will quote here Dr. Maudsley's own words, so pregnant as such are with the author's especial force and eloquence:—

"It is most necessary to be on our guard against the danger of misapplying ideas derived from internal observation of the functions of mind-centres to the interpretation of the functions of lower nerve-centres, and so of misinterpreting them. Assuredly we have sad experience enough to warn us against involving the latter in the metaphysical haze which still hangs over the functions of the supreme centres."

Again: "Those modern inquirers who have pushed farthest their physical researches into mental functions and bodily organs have notoriously been at great pains to discriminate between the nervous centres which minister to sensation and those which minister to reflection, and have done much to elucidate the physical and functional connections between them. They have never been guilty of calling all knowledge a knowledge only of sensations, for they recognise how vague, barren, and unmeaning are the terms of the old language of philosophical strife where an attempt is made to apply them with precision to the phenomena revealed by exact scientific observation. The sensorial centres with which the senses are in direct connection are quite distinct from, and subordinate to, the nervous centres of ideation

and reflection—the supreme hemispherical ganglia. It is in these, which are far more developed in man than in any other animal, and more developed in the higher than in the lower races of men, that sensation is transformed into knowledge, and that reflective consciousness has its seat.”

The late Sir H. Holland—although, like Dr. Maudsley, un-informed, or, it may be, prejudiced against a really practical psychology (phrenology)—confessed himself assured of the plural functions of the gray matter of the cerebral convolutions, whilst he failed to accept the evidence of Gall and his followers in regard to the location of the several primary qualities, intellectual and emotional, of the mind. The best among the metaphysicians—those very peculiar philosophers who will ignore matter and will give to airy nothing an habitation and a name withal—are without doubt growing into a knowledge of Gall’s discoveries, and making what use they can of the principles and facts taught and proclaimed by him. That this is the case, I would refer, as an example, to the *Study of Character*, including *An Estimate of Phrenology*, by Professor Bain.

Mr. Herbert Spencer, too, one of the most profound thinkers of the day, remarks: “No physiologist who calmly considers the question in connection with the general truths of this science, can long resist the conviction that different parts of the cerebrum subserve different kinds of mental action. Localisation of function is the law of all organisation whatever; separateness of duty is universally accompanied with separateness of structure; and it would be marvellous were an exception to exist in the cerebral hemispheres. Let it be granted that the cerebral hemispheres are the seat of the higher psychical activities; let it be granted that among those higher psychical activities there are distinctions of kind, which, though not definite, are yet practically recognisable; and it cannot be denied, without going in direct opposition to established physiological principles, that these more or less distinct kinds of psychical activity must be carried on in more or less distinct parts of the cerebral hemispheres. To question this is not only to ignore the truths of physiology as a whole, but especially those of the physiology of the nervous system.” Mr. Spencer further adds: “Either there is some arrangement, some organisation, in the cerebrum or there is none. If there is no organisation, the cerebrum is a chaotic mass of fibres incapable of performing any orderly action. If there is some organisation it must consist in that same physiological division of labour in which all organisation consists; and there is no division of labour, physiological or other, of which we have any example, or can form any conception, but what involves the concentration of special kinds of activity in special places.”

Let me ask, does Dr. Ferrier, or those who think with him, hope or expect to prove that physiologists of the mould of Gilbert Blane and Marshall Hall wrote or taught in vain, and that their experiments were failures? It has been demonstrated by many, and especially by those just named, that the inherent irritability of the muscular and nervous tissues (i.e. the contractile movements) or the excito-motory phenomena in man and animals "are strictly connected with the integrity of the spinal cord," and that all such "irritability" or such "phenomena" may exist separately from, and independently of, any cerebral or mental acts. This being the case it must be seen, and plainly seen, by all who desire the truth, that the effects of the vivisections practised by Dr. Ferrier are due only to the certain diffusion of the electric current employed by him throughout the cerebral mass of the cat, dog, or monkey operated on, and the consequent excitation of the basic ganglia, i.e. the lower planes of gray matter; such ganglia being the *bonâ fide* "motor centres." On these the stimulus employed is exhausted, and hence the movements of whatever kind.

The foregoing extracts from the writings of the late Dr. J. Hughes Bennett, Dr. Maudsley, and Mr. Herbert Spencer, together with the references or allusions made to the teachings and opinions of the late Sir H. Holland, Blane, and Hall, may be said to supply a basis, firm and lasting—"a point of departure" to or for those who would rise to the high level of a sound and enduring psychology, or in one word, *phrenology*. Those medical men taking an interest in this "localisation" question should read Dr. Dodds' *Historical and Critical Analysis in respect to the Localisation of the Functions of the Brain*, to be found in successive numbers of the *Journal of Anatomy and Physiology*. On the authority, then, of Dr. Dodds, Dupuy, and even Hitzig, attach a high degree of importance to the very certain diffusion of the electric current employed, from the cortex to the base of the brain, and parts adjacent; and which "plainly enough throws discredit on the idea of the position of 'motor centres' in the cortex itself, to the exclusion of the basic ganglia so termed." Hitzig, we learn, is disposed to credit the blood-vessels rather than the white, the conducting tissue of the cerebrum, with this diffusion of the current; but whatever the source of such diffusion, the same must of necessity prejudice the results of the experiments performed. Dr. Dodds writes: "There can be no doubt that diffusion of the currents forms a possible explanation of some of the phenomena of brain electrification, and further that the danger of this must be directly as the tension of the electricity used." By these words I understand him to mean that the danger or probability of such

diffusion must be in proportion to the persistence and strength of the stimulation; and that such is really the case is shown by the investigations of Drs. Carville and Duret, who affirm, according to Dr. Dodds, "that by progressively increasing the strength of the stimulation we may obtain very different results; the electrodes remaining all the time at the same point." Now it is pleaded or claimed by Dr. Ferrier that in his latter experiments the objection taken to the diffusion of the electric stimulus applied to the *motor centres* (as he calls such) of the cerebrum is duly and completely, as I understand him, silenced and got rid of by "the use of the induced, in preference to the continuous current for the purpose of excitation." But I fail to recognise this position; given the employment of the "stimulation," the mere form of it can signify but little. It may be there are those among us who, sufficiently enamoured with these new views of the physiology and pathology of the brain in man and the higher vertebrates, will accept Dr. Ferrier's views so far as the "induced" and "continuous" currents are concerned; but what can his supporters advance calculated to cover the crushing fact proclaimed by Dupuy, viz., "In one experiment the nerves at the base of the brain were divided to prevent the transmission of nerve excitation, and yet they could still be excited by electrical stimulation of the cortex." As additional elements in the question now being raised in regard to the nature and merits of Ferrier's views, I would add that: (1) The "motor centres" are said to differ in their position on the cortex by different experimenters; thus Furstner disallows Ferrier's centres; that (2) the response of the "centres" to the same measure of stimulation varies from time to time or occasionally. Dr. Dodds writes: "Sometimes centres whose action is *usually easily* demonstrated cannot be caused to react even by a powerful stimulus"; (3) Whilst the susceptibility of the posterior lobes of the cerebral mass is denied by some writers of eminence (by Carpenter, for instance), others have affirmed the contrary; thus "Dupuy has shown that in dogs electrification of points situated at the posterior part of the cerebral hemispheres *will* give rise to *muscular contractions*" (Dodds). Furthermore, Hermann "denies" in the most unconditional manner "that the different movements produced on stimulation of different cortical areas drives us to the conclusion that the cortex forms the centre for those movements." (Dodds.) Thus far it appears that the stimulation of any one or other portion of the cortex cerebri cannot be so localised as to call forth, simply and exclusively, the function of the part operated on. The evidence, then, as above shown, is altogether averse to the teachings of Dr. Ferrier; and such averse or negative evidence culled, as is seen

from the writings of Dupuy, Duret, and Hermann, was, strange as it may seem, put forward by the illustrious Gall himself, something like sixty years ago. In his *System of Phrenology* are found these words, viz., "It is a subject of constant observation that, in order to discover the functions of the different parts of the body, anatomists and physiologists have always been rather disposed to employ *manual means* than to accumulate a great number of physiological and pathological facts; to combine these facts, to reiterate them, or to await their repetition in case of need, and to draw slowly and successively the proper consequence from them, and not to announce their discoveries but with a *wise reserve*. This method, at present the favourite one with our investigating physiologists, is imposing from its *materiality*; and it gains the approbation of most men by its promptitude and its *apparent results*. But it has also been constantly observed that what has appeared to have been incontestably proved by the mutilator *A* either did not succeed with the mutilator *B*, or that he had partly found in the same experiments all the proofs necessary to refute the conclusions of his predecessor. It is but too notorious that similar violent experiments have become the scandal of Academicians, who, seduced by the attraction of ingenious operations, have applauded with as much enthusiasm as fickleness the pretended glorious discoveries of their candidates. . . . In order that experiments of this kind should be able to throw light on the functions of each of the cerebral parts it would require a concurrence of many conditions impossible to be fulfilled. It would first require that we *should be enabled* to restrain all the effects of the lesion to that portion only on which the experiment is performed; for if excitement, hæmorrhage, inflammation, &c. &c., affect other parts, what can we conclude? and how can we prevent these inconveniences in mutilations either artificial or accidental? It would be necessary that we should be able to make an animal whose brain has been wounded and mutilated—who is filled with fear and suffering—disposed to manifest the instincts, propensities, and faculties, the organs of which *could not have been injured or destroyed*. But captivity alone is sufficient to stifle the instincts of most animals."*

* How much have these few words of Gall the character of prophecy! How surely do they go far to cover the objections made, and very properly made, to the experiments of the Ferrier school! There is, however, one element of difficulty and doubt which Gall's apparent foreknowledge did not cover or embrace; that element is seen in chloroform. However, in spite of the inevitable fear or "excitement" of the dog or monkey—due to the preliminary restraints imposed on the animal—in spite of the "lesions" or "mutilations" themselves, and in spite, too, of the inhalation of a poisonous compound—the result of all which is a condition of being as purely artificial and abnormal as such can well be—it must be confessed that the results are of some value, although they fail

Furthermore, it should be known, and well known, that Gall was aware of the effects of the application of a stimulus to the brain's surface; and that he maintained, in direct opposition to the current doctrines of the physiologists of his day, and to "the asserted proof to the contrary afforded by the experiments of Flourens and other mutilators, *the competency of the surface of the brain to originate muscular movements.*" This

altogether to prove the presence of "motor centres" in the gray matter of the brain, which is *the* prime object sought; and because simply—as Gall puts it—it is impossible "to *restrain the effects of the lesions,*" practised "to those parts *only* on which the experiment is performed"; a position, indeed, which Dr. Ferrier has himself admitted in the following terms, viz.: "There is, perhaps, no subject in physiology of greater importance and general interest than the functions of the brain, and there are few which present to experimental investigation conditions of greater intricacy and complexity. No one who has attentively studied the results of the labours of the numerous investigators in this field of research can help being struck by the want of harmony, and even positive contradictions, among the conclusions which apparently the same experiments and the same facts have led to in different hands. And when the seemingly well-established facts of experimentation on the brains of the lower animals are compared with those of clinical observation and morbid anatomy in man, the discord between them is frequently so great as to lead many to the opinion that physiological investigation on the lower animals is little calculated to throw true light on the functions of the human brain. . . . The serious nature of the operations necessary to expose the brain for the purposes of experiment, and the fact that the various parts of the encephalon, though anatomically distinct, are yet so intimately combined and related to each other as to form a complex whole, make it natural to suppose that the establishment of lesions of greater or less extent in any one part should produce such a general perturbation of the functions of the organ as a whole as to render it at least highly difficult to trace any uncomplicated connection between the symptoms produced and the lesion as such. Moreover, the degree of evolution of the central nervous system, from the simplest reflex mechanism up to the highest encephalic centres, and the differences as regards the relative independence or subordination of the lower to the higher centres, according as we ascend or descend the animal scale, introduce other complications, and render the application of the results of experiment on the brain of a frog, a pigeon, or a rabbit, without due qualification, to the physiology of the human brain very questionable, or even lead to conclusions seriously at variance with well-established facts of clinical and pathological observations."

In the *Spectator* for March 3, 1877, there is a review of Dr. Ferrier's *Functions of the Brain*, in which the annexed paragraph occurs. It is worthy of notice, on account of the strange and present ignorance in regard to Gall and his discoveries—discoveries made and promulgated now close on three generations since:—

"A singular and instructive fact, upon which we are inclined to lay considerable emphasis, is that although so many severe operations upon animals have been instituted by Professor Ferrier and others, for the avowed purpose of determining the localisation of the various sensory and motor centres, *contemporary physiologists have agreed only to regard the position of a single one as actually settled*, and that was ascertained purely by means of anatomical knowledge, combined with the observation of cerebral disease in human beings, the very nature of the manifestation of such disease rendering it inaccessible to study by means of the vivisection of animals. We refer to the localisation of the faculty of articulate and written speech in the third frontal convolution of the left side."

Truly Gall settled the position of the "organ of language." His first successful "localisation" was the faculty of "articulate and written speech in the third frontal convolution," not "of the left side" only. Herein we recognise a grave error of Broca—an error which has been pointed out by many in very

very interesting and important fact is recorded in a private letter now extant, from Gall to Baron Retzer, bearing date 1798.*

However, Gall, unlike the modern "experimenters," duly appreciated such "muscular movements." Gall saw clearly enough what Dr. Ferrier has failed to perceive, viz., that the "movements" begotten were but secondary, and the outcome or effects only of the conduction of the stimulus employed from the surface to the base of the brain, and parts adjacent thereto. To confine the operation of the electrodes to the upper and convoluted surface of the brain would be to beget phenomena of a purely *psychical* nature; but inasmuch as this cannot be brought about, else than as an exception to a very general rule or under circumstances to be considered in another place, then the phenomena induced are necessarily of another, a *motor* character. Such is the close relationship of our mental and bodily natures—i.e. the "psychical" and "motor." Between the convoluted surface of the brain and the basal ganglia so intimate and close a relationship exists in man and animals—so continued is the interchange of impressions from above downwards, and from below upwards, that the independent action of either, whether in health or disease, may be said to constitute an exception to the rule. To think is for the most part to act and even *vice versâ*. The comparative absence of the hemispherical ganglia (Solly) in a large proportion of the vertebrates, whilst it denies them the higher mental attributes, the purest affections or emotions, and the tenderest sympathies, leaves them prone as is man to the various nervous derangements or maladies, so often named in this paper. In man the intimate and close relationship between these upper and lower strands of nervous matter

recent times. The late Sir James Simpson was, I believe, the first to disprove the position of Broca, and, as a consequence, to fall back on Gall's view of the matter, to the effect that the "faculty" had its location on "the third convolution" of not one only, but of both hemispheres of the brain. Though entertaining a high regard for Dr. Ferrier's earnestness in the pursuit of medical science, I am inclined not a little to think with Dr. Brown-Séquard, when he says that "the teachings of vivisection on the functions of the brain and nerves are a tissue of mistakes, created by vivisections, but rectified at last by correct clinical observation during life, and careful examination of the diseased structures after death." The harmony of such views of Brown-Séquard with those of Gall is directly apparent.

* This fact is highly interesting, and the "extant" letter referred to as from Gall to Baron Retzer is, indeed, of much value. Taking it for granted that Mr. Prideaux has fallen into no error in regard to this letter, then, indeed, must Dr. Ferrier see the mistake he has made in writing thus: "The views of Hughlings-Jackson, published from time to time in the form of scattered contributions to the various medical journals, and now happily being collected by their author, were regarded by many as ingenious but rather fanciful speculations, and devoid of experimental corroboration, seeing that all experimenters on the brain had failed to produce any such phenomena by irritation of the surface of the cerebral hemispheres."

In so recording the failures of "all experimenters," he, Dr. Ferrier, has but repeated what is very generally believed and asserted.

common to the brain and the "medulla spinalis" is shown by the occurrence of epilepsy, or chorea, or tetanus, in him, for example, subject to acute mental anxiety, or suffering from brain exhaustion. The same relationship is made manifest by the loss of brain power (imbecility) common to or the effect of epilepsy of long standing. Whilst the first is the effect of diseased action acting from above downwards, the second is the effect of morbid action acting in the contrary direction. If Dr. Ferrier were informed of Gall's great and imperishable discoveries; did he know the precision with which Gall and Spurzheim have located on the brain's surface the many primitive qualities, intellectual and emotional, of our mental nature; did he enjoy the many advantages inseparable from a good practical knowledge of phrenology—if he knew where on the cranium of his friend or neighbour to find the several organs of, say, "veneration," "benevolence," and "wonder"; of "causality," "comparison," and "eventuality"; of "combativeness," "constructiveness," and "destructiveness"—he would then have estimated at their right value the movements or "results" of his experiments; such results would then have been looked at from another or a more truthful standpoint, that is to say, as simply effects of a pre-existing or psychical cause: but this consummation so devoutly to be wished for will yet be realised, or I greatly err. Commenting on Ferrier's views, an eminent writer on matters physiological has these words, viz.: "The explanation of the phenomena obtained by the application of stimuli to the surface of the brain, is found in the fact that those innate faculties which require the aid of the muscular system to carry out their behests have the power of originating the movements necessary for this purpose; and hence when Dr. Ferrier applied a galvanic current to the cortical surfaces of the organs of the instinct 'to take food,' 'to seize prey,' 'to destroy,' 'to fight,' 'to construct,' movements of mastication, of 'striking with the claws,' or 'seizing with the mouth,' of 'biting and worrying, of scraping or digging' ensued; whilst the stimulation of the same locality (constructiveness) which put the forepaws and hind legs in action in the rabbit would, in the beaver, superadd the motion of the incisor teeth and the tail. What can be more palpable than that the inferences to be obtained from such experiments are not only far more vague and indefinite than those furnished by the employment of the phrenological method, but absolutely incapable of ascertaining the shape, and defining the boundaries of the organs as has been accomplished by Gall in the case of locality, the shape of which he ascertained to be similar in dogs to its form in man. In short, little more can be said on behalf of these experiments at present than that

in a cloudy and obscure form *they lend a vague general confirmation (not required) to the correctness of the localities assigned to the primitive faculties by phrenologists.*"

To Dr. Ferrier, nevertheless, is due in good part the credit of correcting Broca's error in locating the faculty of speech in a portion of the left hemisphere of the brain to the exclusion altogether of the right. Thus far he has confirmed what, indeed, needed not confirmation to those among us who have kept themselves abreast of the progress in psychological science. Gall, it is well known, was the first to locate the memory of words in the lower frontal convolutions, though not in one only, but in both hemispheres of the brain. His followers in this one particular are many, including the late Sir J. Simpson, and Drs. E. L. Fox and Wm. Ogle. Yet a farther credit is Dr. Ferrier's in having written these few words; they would seem to justify the hope expressed above of his conversion ere very long to a sounder mental philosophy than he has yet reached: "I should be inclined to regard the intimate relation subsisting between ideation and the unconscious outward expression of the idea in muscular action as a strong proof of the close local association of the ideational and voluntary motor centres." Now in these words do we not perceive the groove along which Ferrier is moving? must they not carry him even in the near future to the conclusions of the phrenological school? Dr. Carpenter is evidently afraid of anything so desirable, for he writes thus in Vol. iv. of the *West Riding Medical Reports*, at page 23: "The analogy afforded by the specialisation of *downward* (motor) action, would lead us to anticipate that a like centralisation may exist for *upward* (sensory) action; and that particular parts of the convolutions may be special centres of the classes of perceptive ideas that are automatically called up by sense impressions; and anatomical investigation, particularly in the lower animals—in which such ideas may be supposed to prevail almost to the exclusion of the intellectual ideas—may not improbably throw light on this relation. But in regard to those mental processes which mainly consist in the selection, classification, and comparison of distinct ideas, whether perceptive or purely intellectual, *it still seems to me just as improbable as it formerly did*—(1) That there can be special organs for their performance, such as those named "comparison" and "causality" in the phrenological system. I consider, therefore, that the results of Dr. Ferrier's experiments encourage the belief, that by the combination of anatomical and developmental study, of experimental inquiry, and of pathological observation, much light may be thrown on the functions, not merely of the several ganglionic centres which are aggregated in the human brain, but on those of the different parts of the

great 'hemispheric ganglion' formed by the convoluted layer of the cerebrum."

It may be, however, that when Dr. Carpenter reconsiders the whole matter, and prefers to dwell on the effects of a galvanic current applied to the organs of "alimentiveness," of "destructiveness," of "combativeness," and of "constructiveness," shown by the movements "of mastication," "of striking with the claws or seizing with the mouth," "of biting and worrying," and "scraping and digging," he may yet farther modify his judgment. In repeating the experiments of Ferrier, it was suggested to Dr. Burdon Sanderson to slice off the gray matter of the brain, and apply the electrodes to the cut surface of the white or fibrous structure. It was even then found that the same effects to all appearance followed this mutilation of the animal operated on. The fact is of value, inasmuch as it proves that the movements so called forth can be in no way dependent on the gray matter of the convolutions, or rather on any "physical antecedents" occurring thereto, and of which the psychical phenomena observed in the absence of such mutilation are the direct effects. Strange to say, Dr. Carpenter would disassociate these "physical antecedents" from the "mental states themselves," and because, as he puts his objection, "we can scarcely believe that ideas and emotions can be called up by faradisation of a cortical substance in animals" "stupefied by chloroform." The criticisms of Dr. Brown-Séquard are, it will be admitted, of an extreme character. He carries his objections to the localisation of function as well as of disease of the brain much too far when he affirms that *the conclusion* of "Ferrier's theory is just the same as though he had said that the seat of the will was in the soles of his feet, because by tickling them the muscles of the face were affected."

It is on record that on one occasion when Dr. Ferrier was pursuing his investigations he was so impressed by the intelligent character of the successive actions elicited as to speak of it as "an evidently acted dream." The remark is highly suggestive. Now, had Dr. Ferrier been an adept in matters phrenological it seems not unlikely that in this case he would have been prompted to seek in the monkey and dog the precise location on the cerebral surface not of motor centres, but of some at least of the many active powers of mind belonging to the animals named. The "successive actions" linked or embodied in this "acted dream" if rightly comprehended or duly analysed by one competent to the task, a follower of Gall and Spurzheim, it may then have been found of deep and lasting interest. Such "successive actions" it is likely were simply the outward (bodily) signs of an internal mental condition artificially induced; i.e. "the

muscular expressions of feeling," as Dr. Maudsley terms them.*

I come now to the consideration of a new phase of my subject, one little known to the medical profession, and left therefore, in great part, to amateur physiologists for support. However much doubted, the same rests on a basis of truth which should command the very best attention of all. We know now of the existence of a stimulus of an especial kind, which may be and for the most part is "so localised as to call forth simply the function of the part operated on" (Gall), and which demonstrates whence originate in the cortex cerebri the several primitive emotions, passions, and intellectual qualities of the genus homo. The stimulus alluded to goes by the somewhat undesirable name of "phreno-mesmerism." So long since as 1842 or 1843 it was that Messrs. Gardiner, Mansfield, and Atkinson, in this country, also and simultaneously (I believe) an American physician, discovered that, under certain circumstances or environments of an exceptional kind, the excitation of the different parts (organs) of the brain could be so brought about as to demonstrate in the person operated on the location of the several primitive mental attributes in man. The experiments of the gentlemen named confirmed the fact already alluded to—that generations since Gall taught, in opposition to Flourens and others, the brain's susceptibility to an external stimulus, as indicated by the occurrence of both sensation and motion in the animal subject to such stimulus. And in this case it should be added, for truth's sake, that Dr Carpenter has erred in stating, as he did in 1874, that "it was until lately the current doctrine of physiology that no stimulation of the cerebrum would excite either sensation

* Dr. Maudsley has put the matter in these words, at page 30 of his work entitled *Body and Mind*. "Fix the countenance in the pattern of a particular emotion—in a look of anger, of wonder, or of scorn—and the emotion whose appearance is thus imitated will not fail to be aroused. And if we try, while the features are fixed in the expression of one passion, to call up in the mind a quite different one, we shall find it impossible to do so." The above is in perfect accord with the "*experiments of the late Mr. Braid on persons whom he had put into a state of 'hypnotism,' for when the features or the limbs were made by him to assume the expression of a particular emotion, thereupon the emotion was actually felt by the patient, who began to act as if he were under its influence. We perceive then that the muscles are not alone the machinery by which the mind acts upon the world, but that their actions are essential elements in our mental operations.*"

Startling as all this is, yet is there no room to doubt this "hypnotism," so named by Braid, nor to discredit (what is much the same kind of thing) the "mono-ideasm" of the late Dr. Hughes Bennett? Doubtless the phenomena which go by the several names of "hypnotism," "mono-ideasm," and "mesmerism," have a nature in common. That they run into each other and mutually illustrate each other as varieties or modifications of a single force are known to do, there is reason to believe. Such would seem as so many links in the single chain of causation—as elements in Nature's teeming laboratory, wherein all bespeak the reign of law, order, and unity.

or motion, and that the converse of this was first ascertained by Hitzig in 1870."

By the "certain circumstances" or "environments" named above are meant those which belong to the "mesmeric sleep," so called. In such a state of being it was that the discoveries of Gardiner and others were made. Such marvellous results as those witnessed in 1842 or 1843 in the drawing room of Dr. Elliotson can never be forgotten by those then and there present. The precision with which the many experiments were made and the many proofs then afforded of the accuracy of the accepted localisation on the brain's surface of the several primitive affections, passions, and intellectual powers or faculties comprising our nature, were indeed marvellous. The mere touch by the finger on the head of him or her operated on, in the situation of the "organ" of "combative-ness," of "constructiveness," of "acquisitiveness," of "secretiveness," of "self-esteem," &c. &c., resulted in movements of the most extraordinary and convincing character; i.e. in the outward and visible expressions of internal or psychical states of being. That these "expressions" and "states" stood in the closest relation to each other (as cause and effect must ever stand) as parts of one whole, phases of a single phenomenon, could not be doubted. The natural language of "combative-ness," as of "veneration," of "constructiveness," of "self-esteem," &c., has been and is, under the necessary conditions, evoked by the contact above named of the operator and him or her operated on: such "contact" affording the necessary "stimulus" to action of pretty nearly the whole range of what may be called the "phrenological organs." The clearness of the response is of course dependent on the condition of the person experimented on. In some cases only a few parts of the cerebral mass are found susceptible; in others many more, or even the whole brain. "In rare instances," we are assured "that the mere pressure of inanimate substances will excite the action of the cerebral organs, and that this same action will be made manifest by positive and well-defined muscular movements, giving rise to expressions indicative of, it may be anger, or fear, or pride, or veneration; and so on through the several primitive faculties of the human mind."

To realise the importance and value of the above discovery, it must be borne in mind that to it we are indebted for a proof, at once tangible and conclusive, of the great value of the teachings of Gall and Spurzheim. The correctness of their localisation of the functions of the brain becomes at once so plainly demonstrated that the non-acceptance of phrenology is next to impossible. However, as I have written elsewhere, "the

difficulties of unlearning are great," and, as it would appear, insurmountable to even many men of the highest order of mind. This fact will I doubt not in after times be classed among the hallucinations of men of genius.

The late Mr. Uwins, R.A., was among the very first to not only recognise "phreno-mesmerism," so called, but to utilise it. As a painter he saw clearly that it may be made an important auxiliary to his art, an aid to both the brush and the chisel. In January 1843 he read a paper on the *Effects of Mesmerism upon various parts or organs of the Brain in Man*. This paper can be seen in the *Zoist* for April of the same year. From 1843 to this present time the subject has been taken up by several, and notably by Drs. Gregory and Ashburner.

But there is no real need to go back a generation for an assurance that parts of the cortical substance, the psychical basis or first starting point, of mind, in all its phases, are affected by a local stimulus of the kind named, or are rendered so highly sensitive as to furnish to the experimenter palpable and various muscular movements involving responsive changes in the "expression," the outcome of the temporary and dominant mental life, and so on; for in the early part of 1874 Mr. Serjeant Cox published the second volume of his *Popular Mental Philosophy*. In this book he treats of the *mechanism of action* of the brain and its parts; and if you look to Chapter xiii., page 172 *et seq.*, you will find described the mental phenomena which attend on *artificial somnambulism*.

The experience of Mr. Serjeant Cox with or on somnambules justifies him in asserting that "when the patient has passed from the sleep-like condition into what appears to be an active existence, although he is unconscious and insensible, you can, by touching his head lightly with the finger excite the brain to action *in almost any manner you will*." He adds these words, viz., "This curious exhibition of cerebral excitement is not exceptional. It can be produced in the majority of somnambules on the first trial; but in all, with very rare exceptions, after half a dozen experiments."

Assuming, then, the certain and plainly demonstrated truth of the foregoing, can you doubt the great and very high claims of Gall and Spurzheim to our admiration and respect? That they should stand in the very foremost rank of the most successful contributors to physiological knowledge can in no way be well disputed.

Without doubt the discoveries of Messrs. Gardiner and Mansfield, backed up as such were by Drs. Elliotson and Gregory, and are now by Mr. Serjeant Cox, the most recent advocate or supporter of "phreno-mesmerism," have added

greatly to the reputation of both Gall and Lavater. Their united and original labours demonstrate very conclusively the "invariable relationship between outward appearances," the expression, &c., "and internal powers." Whilst Gall found in the external form or shape of the brain (in man and animals) the subjective and physical conditions necessary to individual character, the several and specific tendencies to mental power and action, Lavater may be said to have detected how and in what manner such "conditions" or such "tendencies" are indicated or expressed externally. He (Lavater) was one of the first to tell us what *are* the outward and visible signs of the internal and invisible mental attributes in the genus homo. However, to witness this close relationship and mutual dependence of the "internal powers" (Gall) and the "outward appearances" (Lavater) to be seen in the somnambule, when in the hands of a successful manipulator, is to be assured that "phrenology" and "physiognomy" are but parts of one whole—and this a most important whole. Truly did the illustrious Bacon anticipate such when he penned the annexed few words: "The lineaments of the body do disclose the disposition and inclination of the mind in general; but the motions of the countenance and parts do not only so, but do farther disclose the present humour and state of the mind or will." The late Sir C. Bell in his *Anatomy of Expression* has well illustrated the position of Bacon, although uninformed in great part of the writings of Gall and Lavater. In Darwin's *Expression of the Emotions in Man and Animals* a vast number of excellent examples are to be found of the dependence of the body on the mind, the corporeal on the psychical. Mr. Bain writes: "I believe it to be a general law of the mind that, along with the fact of inward feeling or consciousness, there is a diffusive action or excitement over the bodily members." Reverting to the discoveries in "phreno-mesmerism" it is seen that certain psychical phenomena preceded the corresponding external or bodily (muscular) movements, whether in the face or extremities; these being the direct effects of the acquired or induced mental states, as portrayed in the somnambule; but examples are within our reach of another and reverse kind—one in which the mind itself responds to muscular action, reflecting back, as it were, its own image or temporary state of being. Given a particular movement, or series of movements belonging to, or expressive of, any one especial emotion or feeling, then may we look for the mind's response to the same—a response which indicates the sure presence of the same "especial emotion or feeling" in him or her experimented on; and this irrespectively of the will, or of anything akin to it. The exponents of human feeling, to write or speak critically, are seen to a large extent in the

muscular system, and in the movements of the face (expression), and hence it is the brain (mind), and not less the body, are alike necessary to the entirety of any single emotion or passion in man. The metaphysicians who will soar into the regions of cloud-land for their poor philosophies will do well to bear the above fact in their memories. They will do well also to accept the very good advice indicated by the following sentences from Dr. Maudsley's *Body and Mind*, viz., "Those who would degrade the body in order, as they imagine, to exalt the mind, should consider more deeply than they do the importance of our muscular expression of feeling. The manifest shades and kinds of expression which the lips present, their gibes, gambols, and flashes of merriment; the quick language of a quivering nostril; the varying tones and ripples of beautiful emotion which play on the human countenance, with the spasms of passion which disfigure it—all of which we take such pains to embody in art—are simply effects of muscular action, and might be produced by electricity, or by any other stimulus, if we could only apply it in suitable force to the proper muscles. . . . Suffice it to say, that the special muscular action is not merely the exponent of the passion, but truly an essential part of it."

The remarks above illustrate, very fairly, the reflected up and down and to and fro currents of nerve force, whether or not these have their origin or starting point in the emotional or motor centres—i.e. the upper or lower strands of gray matter of the cerebrum; for to such "lower strands" whatever there is of "muscular action" must be due.*

* The words of the poet (Pope) to the effect that "all are but parts of one stupendous whole" derive an especial illustration from the co-ordination or mutual dependence of the nervous and muscular (the mental and bodily) systems (forces) pointed out in the text. Evidence such as that referred to—and for which the world is indebted so materially to the late Mr. Braid, of Manchester, confirmed as it has been by the late Dr. J. Hughes Bennett, and others now deceased, to say nothing of the many eminent living writers, among whom are found Mr. Serjeant Cox—can be second in scientific importance to none other of the kind; but the difficulty is to insure the attention of the younger medical men—the rising generation of doctors—to such a lofty and ennobling theme as the words "hypnotism," "mono-ideasm," and "phreno-mesmerism," comprehend or embrace. However, "if time and skill *will* cure the blind," as has been prognosticated, then must *patience* be indeed our motto. What can we, whose good fortune it has been to get coached, and successfully coached, thus early, do but wait the good time coming for the many not yet disencumbered of their medical leading strings—their "ancient faiths;" not yet enabled to think and act like men; not yet confident in their own inherent strength and judgment; and anxious withal to protract their infancies to the tomb. What else, I ask, is within our reach than to hope—hope in the great future of TRUTH—which, as Byron puts it, "is a gem which is found at a great depth; whilst on the surface of this world all things are weighed by the false scale of custom"?

I would venture to add here, as an apology for, and in confirmation of, the preceding remarks that the late Dr. J. Hughes Bennett felt very keenly in reference to "mono-ideasm," as he has termed it. It must have been so, or he would never have written thus: "The facts of mono-ideasm are highly im-

If "physiognomy" is destined to assume a higher, a more scientific standpoint than it has yet done, such will be the outcome of "phreno-mesmerism." By the adoption of it as a means to a thoroughly practical end the teachings of Lavater, associated as they should be with those of Gall and Spurzheim, will receive an additional impetus forwards. Moreover, if the face be indeed "the index of the soul," if "the free expression by outward signs of an emotion intensifies it;" if, on the other hand, "the repression of all outward signs softens our emotions" (Darwin), and if, under such circumstances, the said "expression" and "repression" are qualities to be acquired and duly exercised by the systematic and artificial excitation of the "conscientiousness," &c., and in view of what is right and just—or the exercise of our higher mental attributes to the exclusion, more or less, of the lower belongings of our nature—then indeed may this "stimulus" (phreno-mesmerism) be enlisted in the cause of education and the moral training of our youth, i.e. in the cause of progress, of civilisation. The words of Darwin are calculated to encourage, somewhat, such a hope, for he writes thus at p. 366 of his work *On Expression*, viz., "Even the simulation of an emotion tends to arouse it in our minds." He adds: "Shakespeare, who from his wonderful knowledge of the human mind ought to be an excellent judge, says:

"Is it not monstrous that this player here,
But in a fiction, in a dream of passion,
Could force his soul so to his own conceit
That, from her working, all his visage warm'd;
Tears in his eyes, distraction in 's aspect,
A broken voice, and his whole function suiting
With forms to his conceit? And all for nothing!"

Hamlet, Act ii. Scene 2.

I will now proceed to the consideration of matters pathological and so conclude these "Notes." Assuming that the cortex or gray matter of the cerebral convolutions is the origin or seat of the several normal and primitive (elementary) faculties

portant, and demand the careful consideration of the physiologist and medical practitioner." Such "facts recently ascertained in connection with this subject open up a new field for investigation, not only in physiology and practical medicine, but in what relates to evidence as it is now received in our courts of law. . . . All the phenomena produced are strictly analogous to what medical men are acquainted with in various morbid states; and it must now be considered *as well established*, that in certain conditions of the nervous system they may be induced at will. This conclusion, however, *is something new*, for it has but recently been received in physiology or pathology, that a condition of the cerebral functions may be occasioned in apparently healthy persons in which suggestive ideas are capable of producing those phenomena we have described, and which render them, for the time, as irresponsible as monomaniacs. Yet such is really the fact, and once admitted into physiology must have an important influence on the theory and practice of medicine."

To the same effect writes Mr. Serjeant Cox; at page 152, Vol. ii., of his *Popular Introduction to Mental Philosophy*, Chapter xi., *On Artificial Som-*

of the mind, it follows that the derangement or disease of either one or more of the same faculties will be the effect of some lesion or morbid change affecting a portion, more or less, of the gray matter of one or more of such convolutions. Now, one of the elementary mental powers or faculties is recognised as the memory of words—the function of speech or language. The seat of this power or faculty is, we know now, exactly where Gall located it three long generations since, viz., in the third frontal convolution of either hemisphere. Some fifteen years ago a case was reported by the late Mr. Norman (of Bath) of a groom who received a kick from a horse on the lower part of the forehead between the two eyes. He recovered from the immediate effects of the injury, but *ever after lost the memory of words*. The record of this case, though imperfect, is not without interest. Dr. B. J. Glisson is the author of the annexed letter which appeared in the *Lancet* (I think) in August of 1875; it is headed *Arrest of Speech in an Infant after a Blow on the Head*.

“Sir,—A few days ago a patient consulted me for a skin affection on her son, a fine little boy four years and a half old, and told me the following about him. When he was eighteen months old he received a fall from which he had a contusion of the skin and a small tumour in the temporal region (left side). He gradually recovered. Before the accident he was just commencing to prattle a few simple monosyllables, but since then has not been able to speak, and has scarcely ever tried. If any of your readers have met with a similar case, and can recommend anything to remedy the disability, I will be glad to know of it.”

In the above two cases the “organs of language” were the seats of the injury.

In the *Medical Psychology* of the late Mr. Robert Dunn, of London, is seen reported several cases bearing more or less directly on the faculty of speech as a primitive mental endowment. Mr. Dunn says truly: “Gall was the first to assign the faculty of speech to a special cerebral organ—to the anterior cerebral lobes. His allocation has found *advocates in many distinguished physiologists, viz., Serres, Paul Grandchamps, Belhomme, Bouillard, and others.*” Mr. Dunn’s first case was that of a lady, aged 66 years, who suffered from three attacks of apoplexy. “The first, which occurred in October 1844,

nambulism, are these words, viz., “The phenomena of somnambulism (i.e. mesmerism once called), at first fiercely disputed, and their assertors denounced as knaves and dupes, have come to be accepted as substantially true. But then they were declared not to be new truths, but to have been familiar to every physiologist and psychologist under other names, such as hysteria, or hallucination, and now they have taken their place in *physiology among the recognised incidents of a rare condition of the nervous system.*”

seemed 'congestive' in its character, and passed away without any other permanent consequence than this, that she continually used one word for another, not applying appropriate names to the things or persons she desired to signify. The second attack, in May 1847, left her permanently hemiplegic on the right side, the power of voluntary motion being completely abolished; and but little sensibility being preserved, though reflex movements could be excited on the lower extremity by tickling the sole of the foot. For the rest of her life she remained altogether incapable of speech, not being able to say Yes or No in reply to a simple question, and never getting beyond the utterance of the monosyllable 'dat!' 'dat!' and yet all her senses were intact, the motions of the tongue were free, and there was no difficulty of deglutition. She did not seem to have lost any of her intellectual powers; but her emotional sensibility was certainly increased. Her general health continued good up to the time of the last fatal seizure, which occurred in April 1850, without any premonitory symptoms. At the *post-mortem* examination, the upper two-thirds of the anterior lobe of the left hemisphere was found to be in a state of complete destruction, with colourless softening; while the middle and posterior lobes were sound and healthy. To another instance I would briefly advert, as the lady died afterwards in an apoplectic seizure, but no *post-mortem* examination could be had. In her case, a day or two after a seizure, which occurred in the street, the perceptive and thinking powers were regained. She knew where she was and all the family about her, as well as myself; but the *memory of words* was for some time in abeyance. She could not recollect the name even of her own daughter, who was constantly with her. She had a perfect recollection of past circumstances and events up to the time of her seizure; understood whatever was said to her; felt deeply conscious of her own inability to recollect names and common words when talking, and gave expression in consequence to emotional distress or feeling in tears. As I have elsewhere observed, in this case, it may be fairly inferred that the sudden shock to the nervous system in the first instance deranged the organic actions and normal correlations of the emotional and intellectual centres. The delirium was of short continuance; coherence of mind was soon regained, and the powers of thinking and reasoning were gradually, though slowly, restored. But there long remained—indeed, up to the time of her death—a manifest dislocation of the memory of words on the slightest emotional excitement or mental agitation." . . . "I have lately had under my care a married woman of the nervous temperament and great emotional susceptibility, the mother

of a large family ; and who, during the latter months of her last pregnancy, met with a sudden and painful nervous shock, the effect of which was to deprive her of the power of speech, and to produce giddiness and confusion of mind. When I first saw her, some hours afterwards, she had recovered the power of articulation, and regained the integrity of her reasoning faculties ; she knew everyone about her, and was perfectly sensible to what was going on around her, but had lost the memory of the names of those about her, and of words she could not recollect or give the name of the commonest article of household furniture, as a chair or table, &c.; and sensible of her inability, she frequently burst into tears. She eventually recovered."

To the above several cases of aphasic disorder I may add a fourth occurring in my own practice some months since. A young girl nine years of age was observed to become dull and listless ; and what was very remarkable in her, she ceased to take any kind of interest in her daily lessons. Her sleep was disturbed, and during it the head was moved involuntarily to and fro on the pillow. After a time she became, by degrees, speechless ; everything like a memory of words failed her. The intellectual powers and the affections retained more or less their normal state, or so it appeared to the child's parents and their friends. On being spoken to or asked a question, she seemed to know what she should say or what to reply, but it was plainly indicated where or in what direction the defect lay, the necessary or required words were forgotten ; they came not at the bidding. Here was a case of cerebral disturbance in which aphasia was the predominant symptom. The cause of the disorder was speedily found ; the presence of worms in the intestinal canal suggested a case of symptomatic or secondary brain disturbance ; at any rate my treatment in the main was such as to dislodge the said worms, and to free the *primæ viæ* of all such intruders in the present whilst their procreation in the future was guarded against. As the illness of this child had been of some duration when I first saw her, and as, moreover, the secondary or cerebral mischief had fallen on one too evidently predisposed by an hereditary taint to disorder of the nervous centres, it was some three or four months before the original health was restored to my patient ; but with it came back the full memory of words : she became as loquacious as ever, and not less studiously inclined. I would add here that though unable to say *why* the morbid and reflected action set up in the *primæ viæ* did in the foregoing case fix itself so palpably on or in such close contact with the "organ of Reil" so called by Broca and his coadjutors in preference to any other "organ" or primitive faculty of the mind, yet such was the case.

Years since I put on record the fact of a young man who, having tænia in his intestines, was seized with so morbid and excessive an action of "destructiveness" as to have nearly killed during a very temporary attack of impulsive mania (homicidal mania) a sister, a girl to whom he was much and tenderly attached. A full dose of calomel and scammony, followed by another of castor oil and turpentine, freed him of his tapeworm, and gave him back what I may call his *freewill*, or moral constraint. Mr. Dunn describes also an interesting case wherein the organs of *firmness*, as located by Gall and Spurzheim, were found *post mortem* in contact with a "tubercular deposit." The selfwill and obstinacy of the patient during the illness which preceded death attracted much attention, inasmuch as such was so very foreign to the little boy's habits and tendencies. But I must ask your attention to certain details in regard to this case as given in the recital of it to be seen at pages 59 *et seq.* in Dunn's *Medical Psychology*. Mr. Dunn has these words, viz.: "There was a peculiarity—a psychological phenomenon—in this case which is worthy of record. Both the parents of the child, for four or five months previous to his attack, had been particularly struck with a marked change in his disposition which had been gradually taking place. From being a happy, placid boy, he had become irritable, peevish, and petulant, impatient of control, very determined to have whatever he set his mind upon, and not to be driven from his purpose; in a word, to use their own language, he had become a most *selfwilled* and obstinate little boy. So marked, indeed, was this change in his disposition, that it had become a subject of serious consideration with them whether it was to be attributed to some latent disease under which he might be labouring, or to mere infirmity of temper; but as the child continued to eat, drink, and sleep well, and did not appear to be suffering from any bodily complaint, they did not take any medical opinion, but contented themselves with endeavouring to correct, by moral discipline and management, what they were induced to consider rather as an infirmity of the mind than of the body. Now, it is certainly a significant fact, and worthy of notice, that *tubercular deposit* should be found to be situated on *that part of each of the hemispheres* where Gall and Spurzheim have located their organs of *firmness*: it extended a little, perhaps, beyond the boundary line, especially on the right side, and encroached upon the site of the organ of *self-esteem*. In such a case as this it is but reasonable to infer that among the first of the morbid effects arising from the tubercular deposit would be an *irritating excitement* in the gray substance, which would lead to an abnormal development of its functional power; and as obstinacy is an

abuse of firmness, if we associate the change of disposition which had taken place in the child with the structural disturbance induced by the tubercular deposit, we cannot resist the phrenological inference as to the site of the organ of *firmness*. The attempt indeed to trace the connection between structural diseases of particular portions of the substance of the brain and deranged, impaired, or obliterated manifestations of the mind, however it may be beset with almost insuperable difficulties, is nevertheless one of vast interest and great importance; and, to this end, I cannot suppress my conviction that it is an incumbent duty upon the medical practitioner to make himself thoroughly acquainted with the principles and facts of phrenology, and with the respective sites or localities of the different organs in the cerebral convolutions; and to let no opportunity slip of bringing phrenological doctrines to the test of experience. If I am not greatly mistaken, it is to *post-mortem* examinations of the brain, and to pathological investigations, more than to any other source, that we are to look, not for the discovery of normal functions, but for evidence in support or refutation of the dogmata of phrenology. In the case I have related, while the peculiarity of the motor phenomena at the beginning of the attack led to the belief of the existence of tubercle in the brain, the psychological phenomenon, or observed change in the disposition of the child, was the *only* indication of the *local* seat of the disease."

A tradesman of Bristol, when under the influence of alcohol, fell down a flight of steps and received a heavy blow on the outer angle of the left eye. This injury confined him to his room for some weeks. Months afterwards I was consulted, because when engaged in business matters he was very commonly perplexed by a forgetfulness of the necessary words. He is now dead. I know not if any *post-mortem* examination was made.

Another mental element is represented by the capacity to recognise *time*. This faculty, or power, has its location on either hemisphere towards the outer portion of the fore part of the brain, in a direction upwards from the external angle of either eye. A lady, now residing at Clifton, fell on proceeding down stairs; in one hand she held a brass candlestick, and on this her head struck violently on reaching the ground. The force of her fall was expended on that part of the head just referred to. One humerus was dislocated. On her recovery from the immediate effects of the fall she discovered, on resuming her musical exercises, that she had lost much of her notion of "time"; she has now recovered the lost power.

The two following cases of disease, confined for the most part to the organs of *veneration*, are to be found in the *Zoist* for

1843, a journal not now in existence. The second of these cases appeared originally in the provincial *Medical and Surgical Journal* for March 1843, and from it was copied into the *Zoist*. E. M., æt. 64, an inmate of the Hanwell Asylum, and for some time past the subject of chronic rheumatic disease, &c., expired on December 6, 1842. The examination revealed the brain and membranes apparently healthy, with the exception of old and inseparable adhesions between the surface of the convolutions, indicating the organs of veneration, and the membranous structures naturally in contact only. A nephew and niece of the deceased told me that in 1837, about when the old lady became insane, her friends were first made conscious of her disease by an extraordinary penchant she evinced for theological dispute; and which eventually became so excessive that she has been known when attending divine service to call the officiating clergyman to order for, as she said, attempting to promulgate opinions on religious matters at variance with the truth. She subsequently regarded herself as an apostle, and used to declare she was an instrument in the hands of the Almighty with which to effect great good. Such is the early history of E. M., and which when considered in connection with the *post-mortem* appearances, is of value. During the last two years of the life of this person, during which she was under my care, it was observed only that she was a little strange and irritable, and exhibited a tendency to apply the epithet "wicked" to those about her, while she conjectured their probable fate in a future. The effects of sacred music were of a very marked character. It sent her into a thorough ecstasy, during which she talked wildly and gesticulated in no ordinary manner. The voice became at such times peculiarly shrill and tremulous. Such paroxysms occurred not unfrequently at the asylum chapel, and thus it was her attendance there was forbidden. In my record of this case in the *Zoist* I have described it as one of excessive action of small organs. The physical condition of the cranium being such as to suggest to the phrenologist "veneration small."

For the other case we are indebted to Mr. Millar. A clergyman, after prolonged study and a total neglect of all measures calculated to preserve his health, presented some premonitory symptoms, and after a few weeks exhibited the most positive evidence of disease of the brain. "He had," writes Mr. Millar, "that morning called on a notorious drunkard of the village to read him a sermon on his besetting sin. But his parishioner received his ministerial offices so contemptuously as to resolutely order the reverend curate out of his house. This conduct had such an effect on his already

excited feelings, that he rushed into the square of W—— holding his Bible in the air, and knelt down praying God to subdue the obstinacy of the sinner's heart, and, rising up, began most vociferously to exhort people to repentance, for sin had darkened the land and the judgments of God were coming upon the earth. After much difficulty he was compelled to go home, when he ran up into his bedroom, stripping and washing himself by dashing basins of cold water over his body, and praying most earnestly 'that the waters of life he was now washing in would cleanse his soul from all sin.' This process he had repeated thrice; and such was the intensity of his convictions respecting his own impurities, that each time he determinedly refused to be dressed in the same clothes because they were unclean. He lived twelve days, and the following is the account of the inspection of the brain: the vessels of the dura mater were tinged with blood looking blue and prominent, and so adherent was this membrane to the cranium that it was impossible to separate it entire. The sinuses were loaded with blood; the arachnoid membrane was firm and opaque, having a fluid yellow fibrinous secretion between it and the pia mater; this was particularly manifest over the convolutions along the mesial line of each hemisphere, and on the left especially. The pia mater was gorged with blood." Mr. Millar remarks: "The character of the insanity is, I believe, sufficiently well accounted for by the nature of his studies, and the serious responsibilities of his professional avocation. And I am free to confess *that the portions of brain to which phrenologists ascribe the functions of veneration were precisely the seat of the greatest vascular excitement*, the most decided opacity and firmness of the arachnoid coat, and the most effusion between that membrane and the pia mater—a most striking evidence of damaged function in connection with organic disease. . . . Many may not be aware that the pia mater is the nutrient membrane of the brain. It is excessively vascular, dips down between every convolution, and distributes multitudes of vessels to the gray substance. Here, then, we have the most conclusive evidence that a certain abnormal functional manifestation was accompanied by a certain organic change in the membranes; that one of the membranes supplies the vessels for the purpose of nourishing the convolutions, and that the inflammation was more acute in the portions covering the convolutions which cerebral phrenologists have proved to be the organs for the evolutions of a particular faculty—veneration."

To the above illustrative cases others may be added calculated in an eminent degree to command the patient attention

of all really earnest in the pursuit of pathological science. Such cases or such facts, together with the many more contained in this paper (which as I conceive so plainly demonstrates the truth, and therefore the importance, of Gall's discoveries in cerebral physiology—i.e. phrenology), will, it is to be hoped, so fix themselves on the minds of at least a few that the composition of these *Notes on the Psychological Pathology of the Brain* might not prove wholly in vain, or useless.

To conclude: in the *Journal of Anatomy* for July 1878 Dr. N. J. Dodds concludes his series of papers, *On the Localisation of the Functions of the Brain*, with these words, viz.: "The evidence of anatomy, as a whole, while it lends support in many ways to the localisation of centres held by Hitzig, Ferrier, and others, points to a localisation and interconnection of centres very much more complicated than any yet indicated by physiological experiment."

This evidence of Dr. Dodds I would venture to recommend to Dr. Ferrier's attention, asking him at the same time to bear well in mind the truism conveyed in this very significant couplet—

Errors, like straws, upon the surface flow;
He who would search for pearls must dive below.

POSTSCRIPT.

But few readers of the preceding pages are likely to remember the very "unnecessary vituperative discussion," so called by the late J. F. Clarke (M.R.C.S. Lond.), in his *Autobiographical Recollections of the Medical Profession* (1874), in respect to mesmerism, with which the pages of the *Lancet* were encumbered now nearly forty years since. "Actuated by the most disinterested and praiseworthy motives" (Clarke), "and withal earnest in his attempts to account for most of the phenomena obtained by animal magnetism on purely scientific and physiological grounds," the late Dr. Elliotson, who, the late sub-editor of the *Lancet*, just named, declared was "one of the ablest, most single minded and ardent inquirers that has ever existed," entered on a course of experimental inquiry at the North London Hospital, of which he was the senior physician, into "mesmerism" so called. The result was, he demonstrated before London savants the facts taught previously by Baron Dupolet and Cuvier, and confirmed then by many others, including Mayo, Sir P. Crampton, and Dr. Macreight. But Dr. Elliotson, "honest himself, he believed all others were equally honest, and hence," writes the late J. F. Clarke, "the result"—viz., the abuse and "unnecessary vituperation" of him by the late Mr. Thomas Wakley, who "did not believe in the reality of the phenomena displayed" (Clarke), and which led to this—"Elliotson and mesmerism stood and fell together" (Clarke). So thus was the genius of Elliotson

rewarded; and after such a fashion was his noble enthusiasm in the cause of physiology accepted by the profession, of which he was so eminent a member. The *Lancet*, which owed so much to the publication of Elliotson's "reports of cases under his treatment at the hospital" and the able "clinical remarks" appended thereto, proved his near ruin; inasmuch as his income, which amounted through many years to several thousands (according to Clarke to £5,000 per annum), dwindled to a comparatively trifling sum. It but little availed Elliotson that he was declared to have "acquitted himself" as physician and lecturer at the North London Hospital "admirably, and was one of the most popular teachers that ever existed" (Clarke); it was enough that, like Gall, he was an "innovator"—an independent seeker after truth, come it in what guise it would—and therefore it was that the medical press of the time took upon itself to crush him and mesmerism at one fell swoop. To this end there appeared in the *Lancet*, the organ then par excellence of reform and progress (!!) a series of leading articles written by the late Mr. Wakley "in his most forcible and trenchant style" (Clarke), designed to arouse "popular indignation" "against the practice of mesmerism," "its absurdity and immorality" so called.

It has been written, "persecution gives wings to a bad cause and *never yet put down a good one*." Without doubt "mesmerism," or more properly animal magnetism, has not been put down by the ignoble ordeal to which it has been subjected, for its acceptance by the most eminent physiologists and writers on science, past and present, is plainly enough seen. Drs. Esdaile and Druitt, Braid, Cox, Caldwell, Atkinson, and a host more, have written concerning it, and have accepted the "phenomena displayed" as genuine—the very reverse of "humbug" (Wakley).

Through my medical life I have heard much of the late Mr. Wakley's exposure of Elliotson's "foibles and fancies" in regard to "mesmerism" and the O'Keys. Now the present is an opportunity, as I conceive, to put the plain facts of this matter before my professional brothers—I wish I could add sisters. I am indebted for the statement here given in abstract to the late J. F. Clarke; it is to be found in his *Autobiographical Recollections*, quoted here.

Dr. Elliotson and Mr. Wakley met on August 1838 at the house of the former in Bedford Square; the object was to "experiment on the O'Keys." Elliotson was strongly impressed with the idea that the metal nickel, in opposition to lead, could be and was charged with the "magnetic influence" by himself, and that it was conveyed by contact to the girl O'Key, producing in her the ordinary trance effects, &c. Wakley denied the existence in nickel of any such property, and what is more, declared the whole affair to be a deception, a piece of "humbug." The

marked effects—i.e. the violently flushed face, the “full squint,” the prostration, the hurried breathing, the rigid limbs, and “opisthotonus,” he affirmed, were put on, and therefore valueless as a scientific demonstration. As to the nickel, Wakley was quite right, for, unknown to Elliotson, he (Wakley) and Mr. Clarke put the nickel on one side. No metal was used. On taking the nickel from the hands of Elliotson Wakley gave it to Clarke, who put it in his pocket and walked to the other side of the room, a distance of eighteen feet. However, the experiment was continued in the ordinary way by Wakley, when the phenomenon above given was produced, and “with increased violence,” lasting “upwards of half an hour.” On Elliotson being told that no nickel had been used by Wakley, the former expressed a very decided opinion that effects so marked could be produced only through the agency of the metal. Hasty words ensued. “*The experiment was again and again repeated, always with the same results, the nickel on no one occasion having been used.*” It is added, “Elliotson was puzzled, but said he had no doubt that some satisfactory explanation could be found of the circumstances, which would explain all appearance of anomaly in the results.” On subsequent occasions lead was substituted for nickel, when the “mesmeric sleep” (Clarke) was produced; and now it was Elliotson confessed himself “deceived in supposing that lead could not convey the magnetic influence.”

So far the metals, nickel and lead; but, asks Mr. Clarke, how are we to explain the phenomena which result from “mesmeric passes”? The experiments of Mr. Wakley, according to Clarke, “failed to prove the imposture sought for and hoped for in Elizabeth O’Key.” “It is impossible,” he said, “that the results observable in the O’Keys could have been of a voluntary character; no one could fairly deny that there had been ‘effects’ whose cause, by whatever name we might call it, was mysterious, strange, and meriting calm and deliberate inquiry.” Such was the late Mr. Clarke’s opinion as put on record by him in 1874, and after the lapse of some forty years. *So much for the late Mr. Wakley’s “exposure” (?) of the late Dr. Elliotson’s experiments on the sisters O’Key!* It may yet come to pass, as Elliotson affirmed at the time, that a “satisfactory explanation of the circumstances” in regard to the anomalous results of the nickel and lead upon the O’Keys will be discovered; and the reasons demonstrated why nickel could not, or did not, “convey the magnetic influence”; whilst, as Mr. Clarke affirms in his *Autobiographical Recollections*, the application of lead did. The experiments of Charcot and others, now in progress, will, it is to be hoped, add much to our present knowledge of “Metallotherapy” or “Metalloscopy.”

ART. III.—EDUCATION OF GIRLS, CONNECTED WITH GROWTH AND PHYSICAL DEVELOPMENT.*

BY NATHAN ALLEN, M.D., Lowell, Mass., Commissioner in Lunacy to the Commonwealth of Massachusetts,

THE question may be asked, What more can be said upon female education that is new or important? Suppose the same question had been asked twenty-five years ago, would not the changes since that period present a most satisfactory answer? As one contemplates the great improvements made during these years, he is surprised that educators were content to tolerate the state of things that once existed; so will the next generation, when still greater and more important changes shall have been introduced, look back upon this, and wonder that it was so well satisfied with its own methods.

Twenty-five years ago very little attention was paid to the matter of health or to the claims of the body, and as to "the higher education of woman" or the "co-education" of the sexes, these questions had received scarcely any consideration. In taking a survey of the past we see that many improvements have been made; but in forecasting the future it is not so easy to realise that still greater changes are in store. It may require time for their development and completion, but they are sure to come, as discoveries in science and the application of new principles never go backward.

CHANGES IN EDUCATION.

There must be, in the very nature of things, radical changes in the whole system of education. As it is now conducted, the whole process is in a great measure empirical, experimental, not being based strictly upon either the laws of the body or of the mind. The old systems of metaphysics, which, as presenting anything like a correct system of mental philosophy, are discarded in most of the colleges and universities of the present day, still prevail as guides in almost every department of elementary instruction. How can we properly cultivate the *mind*, train and discipline its faculties, and educate them to their highest extent, until we understand more correctly and definitely what these faculties are, and the laws that govern them? We need here a

* Read before the American Institute at its Fiftieth Annual Meeting, July 10, 1879.

true system of mental science based upon physiology—upon the functions of the brain—and the laws that govern the physical system ; and until we have such a system of mental science, all education must be more or less partial, imperfect, and empirical.

That there are serious evils and defects in the present methods of teaching is very evident from a growing dissatisfaction with our public school system among the best educators and most sagacious writers in our country. The conviction in many minds is becoming stronger and stronger every year that, considering the amount of time, labour, and expense bestowed upon our schools, the fruits do not correspond with the immense outlay, or, in other words, they fail too frequently in *practical* results. Nowhere is this failure more striking, and its effects so injurious, as in the education of girls. The most marked feature in this failure, or, injury, growing out of the present modes of teaching, is its effects upon health and the physical system. It is found that great numbers break down while engaged in study, others soon after completing their education, and many others still become physically disabled for discharging the duties, labours, and responsibilities of life. Such results constitute evils of no small magnitude.

It is true these evils do not originate wholly in the school, and, in many instances, it is not at all responsible ; they start in the family and grow out of the present state of society, and while it may be difficult to point out all the sources, an important cause, the most fruitful agency, is connected with the system of education. The evil is not confined, however, to the school or the seminary, but extends, more or less, to the general views and practices on education as adopted and carried on by parents, school committees, and boards of education.

Fifty years ago, or more, scarcely any attention was paid in education to the physical system ; the body was not recognised as of any account in mental improvement. But as the principles of physiology became better understood in their practical applications, it was found that they sustained most intimate relations to education ; and the more thoroughly this science is understood, the more profoundly one is convinced of the importance of observing the laws of the physical system in their connection with mental culture.

Great advances have been made in the physical sciences, and in the application of sanitary law to prevention of disease, to the preservation of health, and to human welfare ; but in every stage and department of education the importance of physical development in its relation to mental culture is altogether underrated. When it becomes fully understood that education, in all its manifold parts and applications, is dependent

upon the brain, and that the functions of this organ are very dependent upon the condition and development of the body, then it will be seen that there is a *right* and a *wrong* way in all attempts at mental improvement, and that, in order for the greatest success, an observance of physical laws is indispensable.

The term education, used in its broadest sense, is not confined to the intellect, to the emotions, or the moral sense, but belongs equally to the physical system, to the whole being, mind and body. Such is their relation and the laws that govern them, that the culture of the former cannot be properly or successfully carried on without that of the latter.

Physiology is a modern science, and its principles, in their practical application, may very justly be said to be in their infancy. In process of time they are destined to have a powerful influence, not only upon human welfare generally, but especially upon education. As it is now conducted, much labour and study are wasted or lost; it is one-sided, or bounded by narrow limits; it is not made practical or useful; it is not adapted to the particular talents of the individual, or to develop harmoniously his faculties; it does not enlist and direct all the forces of the human system in a manner to secure the highest physical and mental culture. To do this, the laws of health must be observed; the relations of the body and all its parts to the brain must be understood; and this must be commenced in childhood, and followed closely through all the years of youth. Some of the greatest failures and mistakes in education commence in early life. This arises from an almost total neglect of the laws that pertain to the growth and development of the body, which neglect is not discovered till too late for remedy.

FIXED PRINCIPLES NEEDED.

One of the chief causes of failure in education is the want of fixed principles as guides. In all matters appertaining to the welfare of the mind or the body, we should always have some definite principles to direct and guide us. The Creator has established such laws in the human system for the proper development of every faculty of the mind, as well as organ in the body. It is the province of physiology to unfold the nature and character of those laws in their various applications. There is one general law in this science which should be better understood. In the whole process of education a most important change is constantly taking place in the physical system which is but little noticed, viz., *growth*. There is not only the regular law of supply and waste going on to support life, but, in addition, nature demands that provision should be made for the increase of growth of every part of the body. This law commences its

operations with life, and continues to adult age, though the changes which nature makes at particular periods are greater than some others. An observance of this law of growth is of the highest importance in the whole course of education.

NORMAL STANDARD.

But before noticing these laws and changes, let us inquire if nature has not established some general or normal standard to which we may always appeal. In considering any subject there are great advantages in having before us some perfect model or pattern, by which every part can be tested. In the organic world, we believe, there is everywhere such a standard, though it may be difficult to find perfect examples of it.

In physiology there is a *normal* standard, and it consists in *perfection of structure and function*—that is, that every organ should be sound in formation and capable of performing its legitimate functions. Thus in the human body all its parts must be sound and well developed, and each must perform its own proper functions, without interfering with that of others. The human body may be compared to a complicated machine, where every part has a specific work to do. Hence it will be seen at once the importance of having the balance or harmony kept up, so that the “wear and tear” shall come equally upon every part. The wisdom of such construction and operation is very obvious.

The most thorough researches into both the sciences of anatomy and physiology demonstrate that there is such a standard of organisation; and upon this foundation is based the law of health and life. It is a *normal* standard—a universal law; and the nearer all parts of the body can approximate toward it, the greater will be found the aggregate amount of health and the longest human life. In the growth and changes, therefore, that take place in the body, it is of the highest importance that this standard or law should be kept constantly in view. Among the Greeks and Romans, where physical organisation was made of great account, we find models set forth corresponding to this standard. In the “Apollo Belvidere” and the “Venus de Medici” we find perfect illustrations of development in all parts of the body. Experience and observation taught the Greeks and Romans that such standards of organisation, of all others, were the most desirable; but the principles of physiology not only demonstrate the fact, but explain the reasons for it and the modes by which it is obtained.

The organisation here described furnishes the foundation not only for the laws of health and longevity, but presents the true

standard of beauty, where symmetry, proportion, figure, and outline are exhibited in their highest perfection. There is still another principle involved in this same organisation, more important than either or all the others—that is, the law of multiplication and continuance of the race. A volume might be written upon each of these topics, and the object of making these general statements here is more particularly to show what may be the effect in education of deviations from this *normal* standard of organisation. It is true we shall find no perfect examples, only approximations towards them, composed of an almost endless variety and character. If these deviations from the normal standard are very marked, they are attended with more or less unfavourable results. This depends very much upon what organ, or class of organs, are included in the deviation.

PHYSICAL ORGANISATION.

It may be said that we cannot change the physical system materially—that this is beyond the power of individual choice and agency. To a certain extent this is true. There is a fixed type, or there are marked features in the organisation of some races, like those of the Jews, which continue for ages. It is so, though to a much less extent, in some families, where their leading characteristics are transmitted for generations. But in both these instances the natural relations are generally confined to the same classes, for just in proportion as this relation extends beyond kinship or race will there be changes in the sameness of organisation.

While the principal features in organisation grow out of the laws of inheritance, radical changes in which must require two or three generations, still many important changes do take place in the life of an individual. If the laws of growth and change were better understood and observed, it would be found that we have far greater power over the physical system in *development* than is generally supposed.

It is an established fact that every part of the body is constantly changing, so that in the course of seven years it is estimated that the whole system is entirely changed, not a particle of the same matter remaining at the end of that time. And although these changes are carried according to certain fixed laws in chemistry and physiology, we have the power, to some extent, of directing and modifying their results. The two principal agents in effecting these results are nutrition and exercise. Careful examination shows that these two great agencies are controlled very much by our own choice and power.

GROWTH OF THE BODY.

The human body is made up of infinitely small cells, and the various changes it undergoes are very properly called cellular development. The principle of "waste and supply" is here admirably brought into exercise. While nutrition from food and air is continually furnishing the means, a set of vessels is provided to carry off all waste matter. These vessels or carriers are called the capillary system, and though at times they are exceedingly busy, yet they never cease their work night or day.

The cells composing the primary elements of the body consist of different orders, and vary in form and size. The bones, muscles, ligaments, nerves, brain, &c., are all built up by cells, and nourished by cells, formed from food and absorption outside through the lungs and the skin. Different kinds of food are, to a certain extent, designed to make a particular class of cells—for instance, some form muscular fibre; others, nerve tissue; and others, adipose matter. The capillary system, which is the agent in these changes in cell-life, is composed of exceedingly small blood-vessels, and is distributed everywhere through the body. They act as connecting links between supply and waste, as messengers carrying nutritious cells and removing those that are waste and decaying. In the whole process of digestion they act as agents, after the food has passed through certain changes, in carrying the nutrition to its place of destination, and then of removing the waste matter; they form an important connection between the arteries and the veins, exchanging pure blood for that which has become impure, extending to the purification of blood through the lungs.

Without entering too minutely into physiological questions, our object is to show briefly what are some of the laws of growth and change in the human system, and that these are, in a great measure, dependent upon human agency. While we may not at once be able to understand all the points or principles involved in the subject, enough may be seen to show how important they are, and that they should be far better understood.

While we cannot draw the line between the kinds of food as to their adaptation to build up this or that tissue, it is well understood there is a great difference in their adaptation, and that selections can be made with special reference to developing the muscles, or strengthening the nervous system, or increasing the lymphatic temperament. If all children possessed the same organisation throughout, the same kinds of nourishment would be adapted to all alike; but as there are exceptions to this

general rule, greater care should be exercised in their cases. The time will come when this whole subject will be better understood, and the laws of nutrition, as applied to all cases, will be more carefully observed.

Connected with the laws of growth and support, the prompt removal of all waste matter, or the secretions, is highly important. Unless it is done, this effete or decaying matter poisons the parts surrounding it, or re-enters the circulation, and becomes the cause of much disease. Nature has made ample provision for this work, but its operations are often thwarted by human agency. For illustration, we may refer to the importance of cleanliness of the skin, or to the normal action of the alimentary canal. Another illustration may be given, in attending to the healthy action of the lungs, that they be not only supplied with an abundance of pure air, but that the impurities generated by internal action should not be retained by compression or want of exercise, and when once expelled, the smallest particles should never be allowed, if possible, to re-enter the lungs again. In the early stages of education, when the individual has no knowledge on the subject, and is entirely dependent upon a parent or teacher for guidance, it is highly important that these rules be applied, as they are then most needed and will do the greatest good.

In providing suitable food for the body many things must be taken into account, and this is far more important to young persons while growing than those who have reached adult life. Attention should be given to the demands of nature in the adaptation of food, that all parts of the body should receive those kinds most appropriate for their growth and development. It is not the mere kind or quality alone, but there must not be deficiency in quantity, neither should it be taken in excess. Then there is the preparation, the cooking part, which is vastly more important in the case of young persons than is generally considered. The health, growth, and constitution of children depend greatly upon the proper preparation of their food. Then the manner and times of taking food should receive careful attention; the food should be taken slowly and be well masticated; should be consumed at regular set times—at intervals of five or six hours, and nearly in equal portions, unless at the last meal; care being taken to preserve always a good appetite.

In the application of the principles here presented there are several important considerations. From the age of 5 to 20 the growth and development of the body should receive special attention, whereas the practice at the present day is reversed. In the matter of education the mind absorbs all attention,

but the claims and interests of the body are regarded as only of little consequence. What are the teachings of physiology upon this subject? The principles of this science, and the lessons taught by experience, should be the guides. It is very obvious that the mind, or the brain, upon which all mental manifestations are dependent, embracing so small a portion of the physical system, should not receive all the attention. From the age of 5 to 20 nature provides especially for the growth of the body, so that all parts of it should obtain at 20, or soon after, a healthy and complete development. After this period there is no natural growth of the body as a whole, but changes may occur in different organs, and especially the brain. During all these years the main object of nature in the organisation seems to be preparatory work—growth, training, development, strength, &c.

From this general law we should infer that no one part of the body should be exercised at the expense of other parts, so that there becomes a premature development. The indication is clear, that if the exercise is carried beyond the laws that regulate its healthy growth, and interferes with the normal development of other parts of the body, the result must be exceedingly injurious. Physiology teaches *unmistakably* that the normal standard is based upon a sound, well-balanced organisation; and the nearer the approximation, in the development of all the organs of the body, the larger the amount of health, the longer the life, and the greater the human achievement and happiness.

THE TEMPERAMENTS.

This principle may be illustrated by the doctrine of temperaments. For the sake of convenience, we take the most simple division, viz.—1. The *Muscular*, or motive, made up of the bones and muscles generally; 2. The *Sanguine*, including the heart, lungs, arteries, veins, &c.; 3. The *Lymphatic*, composed of the lymphatics, absorbents, and glandular system; and 4. The *Nervous*, including the brain and nerves throughout the body.

Now, the more evenly balanced these several temperaments are, the more healthy and perfect is the organisation. Each organ is better able to perform its own specific duty, and, of course, there are greater harmony and less friction in all their operations. In such an organisation there is far less chance for weakness or disease to obtain a foothold.

If there were slight deviations in the balance of the temperaments, it would make but little difference in the health or

strength of an individual. But if any one of these temperaments becomes altogether predominant, it will be accompanied with serious disadvantages, especially if this should happen to be the Muscular or Nervous; for these temperaments constitute the leading agents in the development of the organs embraced in the other two. The muscles involve the motive power, the law of exercise, which lies at the foundation of growth and health; the nervous temperament includes the brain, the organ of will and thought, which of course must have a powerful influence in directing and shaping the development of the whole system.

It may be said we have no power to change these temperaments—that we cannot change or mould the organs of the human body at will. It is true there are bounds or limits in the changes of organic matter beyond which we cannot go; but then, by commencing early in life and persevering in the use of proper means, there is abundant evidence that great changes can be effected. The size and strength of certain parts or organs in the body have been, in many instances, materially changed. Illustrations of this character could easily be given, where the size of muscles have been greatly enlarged, and where the power of the lungs and other organs has been surprisingly increased. The fact is, no attempts have been systematically and thoroughly made for the improvement of the young in this direction. It will never be known what can be done in this way until the trial is actually made; and before any radical changes or reforms can here be effected, we must understand better the evils now existing. We can notice only the more obvious of these evils, with a few suggestions as to their remedies.

EVILS AND REMEDIES.

One of the most encouraging signs of the times is that the attention of the public is being directed more and more to physical improvement. There are undoubtedly serious objections to some of the ways in which this interest is manifested, especially as connected with athletic sports and games. The matter here may be carried too far for the physical and moral interests of those engaged in them. Where this improvement is most needed is in early training in the family, combined with an educational system. Physical improvement should become a leading object both in the family and in the school, and through all the stages of education the culture of the body should go hand in hand with that of the mind. It should be made to apply especially to those who need it most,

whose organisation is weak or defective ; where some parts are imperfectly developed or not well balanced, and there is want of strength and harmony of function. There should be in all schools a system of gymnastics or physical exercises of some kind, wisely adapted to the varied wants of the pupils.

In advocating a more strict observance of the laws of health and life, and objecting to the present modes of education, it should be distinctly understood that no one department of mental culture, no particular mode of teaching, neither the higher education of woman nor co-education, are here singled out for criticism ; neither is it intended to oppose or object at all to female education ; but, on the other hand, we advocate the highest possible mental culture for girls that is compatible with their whole organisation—that harmonises both with the physical and mental systems. This constitutes the only sure basis or foundation for all true culture, and its laws are the certain tests of its correctness and success—for, guided by these laws, there is no theory, no experiment, no failure.

In making application of the principles here laid down, reference will be made more especially to girls, as both in the family and in the school they are less provided with the means for physical development than boys ; while, considering the nature and objects of their organisation, it is far more important for girls. Within a few years the education of girls has everywhere been pressed harder and harder, especially in New England. In cities and large villages girls are sent annually to school from five years of age to sixteen or seventeen, with the exception of ten or twelve weeks' vacation each year. In small towns and rural districts the amount of schooling is less, perhaps from half to two-thirds as much as in cities. While great stress is laid upon the kind and number of studies, and the standard is raised higher every year, scarcely any attention is given to the growth and development of the body. With rare exceptions, there is no system of gymnastics or calisthenics provided in schools for girls, and, generally speaking, no exercise outside of work or play that is adapted to promote their highest physical development.

DOMESTIC TRAINING.

Once it was customary for the girls in our New England families to do much domestic labour, commencing quite early in life. They were trained up to it, year after year. Some part of this labour was hard, and its performance made a severe tax upon the muscles. In this way the constitution of girls became strong and vigorous, capable of much endurance.

Besides, schools were formerly continued only about half the year, and then, in the intermediate time, girls found an abundance of exercise in work. One of the most unfortunate events or sentiments that ever befell any people was the change in feeling and opinion that came over our New England women, in regarding domestic work as menial and degrading. Had this notion been confined to hired service—for that only which received regular pay—this injury would not have been so great. But the notion or sentiment has gradually been taking possession of the minds of our New England women, especially girls, that domestic labour, wherever performed, is degrading—is not fashionable—and that any other kind of work or business is preferable.

These views have not been confined to the city, or to families “well to do in the world,” but have pervaded all classes everywhere; so that very few of our New England girls are trained up to thorough domestic work. Now, no exercise or employment can be found which is so well calculated to develop strong, vigorous, and healthy constitutions in girls as household work, commenced early and persevered in, even the more laborious parts of it. At the present day it is only the lighter kinds of domestic work that girls are called upon to do, and not those harder portions that develop and strengthen the muscles, that harden and toughen the constitution. As girls are now sent to school after six or seven years of age, and kept there five or six hours a day, with lessons imposed which they are obliged to learn more or less at home, there is but little chance or time to attend to household duties. Education is considered by parent and teacher as paramount to everything else; the growth and development of the body, strong and vigorous muscles, a sound and healthy physical system, are practically regarded as of but little consequence.

What, now, are some of the results of this neglect of physical exercise and supreme devotion to mental pursuits? Let us inquire what are the teachings of physiology on the subject. A fundamental principle of this science is, that growth and strength depend upon *exercise*, and of course those parts or organs which are most exercised will receive most nutrition. *Exercise* is a primary law of existence. There may be some growth in some parts of the body without much exercise, but it cannot be continued long in a vigorous and healthy manner.

NORMAL GROWTH.

There is what may be called a normal growth—a regular order—in which all parts of the body should be so exercised

and nourished, that every part, in its own time, may be increased in vitality and strength. If the laws regulating this divine order—this natural growth—are not observed; if certain parts are unduly cultivated, while others are greatly neglected, the consequences must be very injurious, and perhaps ultimately disastrous. This is very well expressed by a distinguished female writer in the following language: "During youth the development of the body must be the first care; its strength, its beauty, the complete establishment of every function, the first conditions for its harmonious growth, must be our ruling principle. There is no possibility of avoiding this necessity—this primary predominance of the material organisation; it is Divine law: every violation will bring its own punishment: and woe to the people or the race where this order is systematically inverted; disease, vice, and rapid degeneracy will inevitably mark its history." Because these evils do not follow at once, their danger does not seem to be apprehended. Such is the nature of those evils, resulting from the violation of physical laws, that their effects are not fully witnessed in one generation, but are developed more and more by the laws of inheritance. It may take several generations for their development, but unless the causes are removed, these evils are certain to come, just as surely as any penalties attached to the violation of the laws of the Almighty.

PHYSICAL EDUCATION OF GIRLS.

That we may then have a better understanding of the subject, let us inquire more particularly what are the relations of physiology to the education of girls as now conducted. What are the facts?

From 6 to 16 years of age girls are confined closely to school, except about twelve weeks' vacation each year. No systematic provision for physical culture is made at the school, neither is there sufficient exercise taken outside for a proper and healthy development of the body. These ten years constitute also the principal time in life for the growth and development of all parts of the system. The period from 12 to 16 is especially a critical time in the growth and health of girls. These years in the high school or seminary are crowded with most difficult studies, combined with examinations, reviews, and exhibitions, which make a ruinous strain upon the brain and the nervous system.

In examining the effects of such a course of study the laws of physiology must be our guide. If we should consider, in all its bearings, the relation of the mind to the body through life,

it would seem as though the latter should receive as much if not more attention, during these ten years, than the former. It is a question whether by such a course the great objects of existence might not in a large measure be secured. It is a fact that great numbers of young people who grow up in the country, with very limited schooling, excel in scholarship and attainment those trained in the schools of the city. It is also a fact that, where the half-time system of schools has been conducted a long series of years, the pupils (working half the time) have made as much progress in learning as those attending school all the time.

That we may obtain more definite views of the effects of education as now conducted, let us consider some of the physiological changes produced by it. The muscles and the brain constitute the two leading forces in the human system, and may be represented by the motive and nervous temperaments. It is of the highest importance that these two temperaments should both be fully developed and made prominent in the growth of the body; otherwise the organs included in the other two temperaments will never attain their proper growth and complete development.

The muscles constitute by far the larger portion of the body; they grow only by exercise, and become strong and healthy only by a great deal of exercise. Thus they receive their proper share of nutrition, increase in size and strength, and gradually obtain that most important quality—fitness for work and power of endurance. This exercise of the muscles must commence early, and be continued year after year, so that the fibres of the muscles, by repeated exercise and contraction, become hardened and toughened; their possessor can then work, and hold on without being tired—will have what is called *great power of endurance*.

On the other hand, where there is deficient exercise and a want of proper growth and development of this temperament, the muscles are pale and weak, soft and flabby, have not sufficient vitality and strength to carry on, in a healthy and vigorous manner, the machinery of the whole system. The muscular temperament, when well developed, receives a large supply of blood, and constitutes the leading agency in causing a free and equal circulation of blood through the whole system; whereas, when the muscular power is weak, there is a great tendency to frequent congestion of blood, especially in the internal organs, which prepares the way for much weakness and many diseases.

Besides, this muscular power, in large supply, is needed to obtain good blood by a more vigorous action of the lungs and stomach; no one thing is more important for good health than

a free and equal circulation of the blood. This muscular power can be obtained only by a great deal of exercise when young ; and no substitute, by friction, stimulants, or other human devices, can be found to replace it. Individuals deficient in this power labour through life under great disadvantages.

AGENCY OF HEAT.

One of the most important agencies in producing changes in the system is *heat*. While the primary source of heat arises from combustion produced in the process of converting nutrition into blood, the muscles have much to do with it in two ways :— 1st, in an active circulation of the blood through all parts of the body, thus diffusing warmth with the blood. The greater the muscular power, the better the circulation. And 2nd, by the muscles themselves acting as generators of heat in their power of extension and contraction, called animal heat or electric currents. The larger the muscular development is, and the more highly vitalised it is, the greater is the amount of heat produced by exercise. Such an organisation is very important to a people living in a cold climate or one subject to sudden changes of temperature. What inconveniences, what disadvantages, what sufferings must individuals be subjected to through life who have not, within their own persons, such powerful generators of heat and warmth ! Clothing to any extent, and artificial heat, from whatever sources, afford poor substitutes. Nature, in its normal state, makes the best provisions for warming the body.

BRAIN AND NERVOUS SYSTEM.

There is another agency holding an intimate relation to the muscles which is of vital importance. The nervous system has three great centres in every individual, where nerve force is generated. The brain is the nervous centre for the mind, the spinal marrow is the centre for the muscles, and the ganglia, so-called, forms the nervous centre for the internal organs. Nervous influences emanate from each of these centres, and while each class of nerves has its own specific work to do, and the functions of one cannot be transferred to another, they hold, indirectly, to each other, most intimate relations. There is this peculiarity in the nerves that have their seat in the spinal marrow, they are composed of two classes—nerves of motion and nerves of sensation, which extend to every part of the system. These nerves are constantly brought into action in all kinds of exercise, and as the muscles compose so large a portion of the body, these nerves are very abundant ; the motor nerves are indispensable to anything like healthy organisation. It is

by the use of these agents that motion and life are kept up in the body.

Suppose now that for a series of years the individual takes but little physical exercise, these motor nerves soon lose their strength and power, and the balance between the nerves of motion and sensation is destroyed. And not only this, but as the nerves centring in the spinal marrow drop down in vitality, while the activity of the nerves centring in the brain and ganglia is constantly increasing, the balance of power between these different *classes* is also destroyed. Whenever this balance or harmony of function is once lost, it is not easily regained. As the strength and power of these *voluntary* nerves become much lessened from inactivity, the individual is subjected more and more to the influence of the nerves of sensation, which have been over-exercised, and not unfrequently become morbid and irritable. The ganglia, the sympathetic nervous system, under whose influence the organs of the body grow and live, will share also in the undue activity imparted to the other centres by the inaction of the muscular system. No description or language can express fully the terrible effects of these changes in the nerves, from a healthy and normal state to one artificial and diseased.

But what are some of the direct effects of the present modes of education on the brain and nervous system? According to the laws of physiology, those portions of the body most exercised receive the most nourishment. If all other parts of the system were exercised equally at the same time, or had received their full growth, such continuous exercise of the brain might not be injurious; but when both these conditions are wanting, the changes that take place in the brain, in its relations to the physical system, from such a course of training, are decidedly unfavourable. In many cases the brain is over-taxed—the development is premature. Such persons break down early—some living many years, suffering with weakness and sickness, while others sink into premature graves.

Many girls may go through the whole course of education—the high school, the seminary, and the college—may shine as scholars in every department of learning, but what can we say of their constitutions, of their physical stamina? Has not the mind or brain been educated too much, altogether at the expense of the body?

These evils are of such a character that physicians only can judge fully of their nature and extent. It is a fact that there has been, within twenty or thirty years, a great increase of diseases among New England women, of such type and character as would originate only from an excess of nerve tissue or the want of a well-balanced organisation. Headaches and neuralgia,

in all their diversified forms, hysteria and neurosis in great variety and intensity, have multiplied. Some of these complaints are accompanied with excruciating pain and long suffering, as they are found difficult to treat and almost impossible to cure. When a person of an intense nervous temperament breaks down in health, it is apt to continue months or years, and sometimes for life. With such an organisation, combined with a want of physical stamina, medicines and sanitary agencies do not so readily afford relief; neither can we call to our aid so fully the recuperative powers of nature. There is no class of complaints so complicated in their nature, so obstinate in treatment, and so doubtful of cure, at the same time accompanied with so much suffering, as nervous diseases.

It may be that here and there a young woman will devote all her early years to thorough courses of study, and become highly educated, as it is said, in every branch of knowledge, without injury to her health or constitution; but these are the exceptions. If a comparison could be instituted between the physiology of the educated girls of the present day and that of the young women from the same class of families fifty years ago, or with that of the young women now living who have been trained up to physical labour, we shall find in these classes a surprising difference. The brain and nervous system will altogether predominate in the former, while the muscular and sanguine temperaments will take the lead in the latter. The former may be far more refined in manner, attractive in accomplishments, and excel in all kinds of knowledge, but can bear no comparison to the latter classes in physical strength, vigour of constitution, and power of endurance. But the differences are more striking than what are indicated by outside appearances. Upon careful examination, the internal evils growing out of the former organisation are far greater than what would at first be supposed.

There are one or two features connected with this extreme development of nerve tissue which call for special notice. It happens not unfrequently with persons possessing this organisation, that when all their wants are not gratified, when overtaken with disappointment or overcome by trials, the nervous system becomes irritable and morbid; the disposition and temper of mind are at the same time changed. Without sufficient muscular force or the control of the voluntary nerves, such persons become anything but pleasant or agreeable companions.

Another feature in such an organisation is its strong tendency to mental derangement. The reason and the will have no controlling influence; the balance in the mental faculties is destroyed; and the individual, composed, as it were, of a bundle of nerves, is governed by mere caprice, whims, or the delusion

of an emotional nature. Our lunatic hospitals contain at the present day many just such persons.

Again, we have stated that when in the course and as a result of education there was a great predominance of the nervous temperament and a want of the muscular, the internal organs of the body do not stand so good a chance for growth and development. As a consequence, these same organs suffer in weakness and greater liability to disease; the lungs, from consumptive complaints; the stomach, from indigestion and dyspepsia; the bowels, from costive habits; and the reproductive organs, from a variety of weaknesses and diseases. The heart also suffers in action for the want of muscular power, and, in case of weaknesses and diseases in different parts of the body, it cannot force the vital currents so well throughout the whole system.

The weaknesses and diseases of all these organs originate more or less from the want of muscular power, and then this defect comes from neglect of the kind and amount of physical exercises which should have been taken while the body was in a state of growth and development. But an excessive cultivation of the brain or the mind has, directly and indirectly, done its full share in producing these evils.

To confirm this statement we might summon a great number of witnesses, but must be content with the following:—Mary J. Studley, M.D., now connected a long time with the State Normal School for Girls at South Framingham, Mass., writes thus: “It has been my privilege, for more than twenty-five years, to be intimately associated with young women, either as teacher in the school-room, in the earlier years, or as medical practitioner, or teacher of hygiene, during the latter ones, and every day’s added experience only confirms me in the position I have occupied from the first relative to the various forms of nervousness which characterise our sex. That position affirms that the best possible balance for a weak, nervous system is a *well-developed muscular system*. Weak, shaky, hysterical nerves always accompany soft, flabby muscles, and it is a mournful fact that the *majority of the young women* whom I meet in schools are notably deficient in muscular development.” In the *normal* school we should rather expect to find more physical stamina, as it embraces only those girls that are pledged to become teachers.

One feature alluded to in this quotation may be thus accounted for: this “nervousness” comes partly from a *pre-mature* development of the brain, and partly from over-stimulating the mind by appeals to emulation, and other motives or objects that are decidedly unwholesome in their influence. By these and other means the whole system is brought into an

unnatural and morbid condition, which is anything but comfortable or hopeful, either as far as the individual or her friends are concerned.

The fact here stated brings us to one of the most serious evils in the present modes of education. While it cultivates the mind and stores it with knowledge, training the mental faculties to their highest extent, and capacitating them for the greatest happiness, it develops, at the same time, an organisation which, unless it has health, the means and ability to be gratified, becomes susceptible of immense suffering both of body and mind. It may be said that such a result cannot be prevented, especially in some cases, but, alas, they are altogether too common, and are likely to increase more and more unless some radical reforms are effected.

IMPORTANCE OF GOOD HEALTH.

There is scarcely any complaint that a physician hears oftener from young women than this—a tired feeling, a want of strength, some weakness here or there, general debility, &c. Such complaints may come sometimes from weak, frail bodies by birth, or from local disease, but more generally they originate from the early neglect of physical exercise and from a want of muscle, which gives power of endurance. We cannot describe this want better than in the language of one who was the first woman in this country to study anatomy thoroughly in the dissecting-room with reference to professional life. This occurred over thirty years ago in Philadelphia, and the individual has been for a long time a successful practitioner of medicine in London.

In describing the defective organisation of American women, says Elizabeth Blackwell, M.D., “We need muscles that are strong and prompt to do our will, that can run and walk indoors and out of doors, and convey us from place to place, as duty or pleasure calls us, not only without fatigue, but with the feeling of cheerful energy; we need strong arms that can cradle a healthy child and toss it crowing in the air, and backs that will not break under the burden of household cares—a frame that is not exhausted and weakened by the round of daily duties. We need muscles so well developed that shall make the human body really a divine image, a perfect form, rendering all dress graceful, and not requiring to be patched, and filled up, and weighed down with clumsy contrivances for hiding its deformities; bodies that can move in dignity, in grace, in airy lightness or conscious strength; bodies erect and firm, energetic and active; bodies that are truly sovereign in their presence, expressions of a sovereign nature. Such are the bodies we need, and exercise, the means

by which the muscular system may be developed, assumes then its true position as of primary importance during the period of youth. It is the grand necessity to which everything else should submit." This is strong language, but none too much so; the description will be heartily approved by all medical men who comprehend fully the powerful influence of the muscular system.

Such an organisation as is here described has two great advantages: 1st, The self-possession and conscious power which it gives a woman; and 2nd, The commanding influence which such a physique everywhere has over others. There is a power, a charm, a magnetism in the female form or organisation, when clothed with all the elements of beauty, which no language can describe.

But such a development of the whole person is not easily obtained; it certainly cannot be by performing the lighter kinds of housework, by a short walk now and then, by occasional gymnastic exercises, by a little croquet playing, or by any amount of piano playing, or attention to music, to embroidery, drawing, painting, &c.

In no part of female education is there so much need of reform as in that of physical culture. If the standard of scholarship is to be raised higher and higher in all our schools for girls, and no greater attention is to be paid to the laws of health and life, grave consequences may well be apprehended.

If this educational pressure was confined to a few individuals there would not be the same danger, but when the great majority of our New England girls are thus crowded, its effects become widely extended and far-reaching into the future. The remark has been made, "Educate a woman, and you educate a race." This saying is full of meaning, and capable of different interpretations. Its meaning or application must depend upon the term "educate"—how and in what way it is done. This "educating" should have reference to the future as well as to the present, to the body as well as to the mind; for the highest developments of brain and nerve tissue alone will never go far towards educating a race—in fact, it will inevitably run out.

God has established most intimate relations between one generation and another by the laws of inheritance. As yet these laws are very imperfectly understood, but enough is known to show that these laws depend upon certain conditions, which must be carefully studied and taken into account. These conditions and laws cannot always be ignored or set aside with impunity.

While it may require several generations for the full development of these laws, the first links in the chain seem the more important. If an education that breaks down and im-

pairs the physical energies of the system, tends to defeat the wise operations of those laws—if this supreme devotion of mental culture alone, combined with other influences in society, is calculated to establish generally a standard of living so high and expensive that the great majority of young people have neither the means nor the physical strength to adopt and carry it out—if such is the result of this state of things, that it must and does interfere directly with the duties of domestic life and the objects of the marriage institution, is it not time to pause and consider whither, as a people, we are drifting? It may be said that education is not the cause of such a state of things or condition of society and the evils that threaten, but it constitutes the leading, if not the most powerful, agency in society. This education commences early with the girl—shapes her habits and character for life, and the influence of woman dictates the fashions of the day and moulds our domestic institutions.

This high pressure of educational influences does not extend much farther back than one generation, and as a people we are just entering upon the second, but we find already unmistakable signs of physical degeneracy. The registration and census reports are bringing to light startling facts in respect to decline in the birth-rate, to the diminution of marriages, to the permanence of the family institution and changes in population, &c. Should the same causes continue and increase, as they may, corresponding results will follow, and the next generation will witness in those matters still greater changes.

Inasmuch as a primary cause of the evils that have been alluded to is, we believe, closely connected with the school system, we would earnestly call the attention of teachers and the friends of education to consider if some reform cannot be effected, and especially to the importance of *physical culture*, in the case of girls. Said President Eliot a few days since, in addressing the *alumni* of Harvard University:—"Now everything depends with us and in the learned professions upon *vigour of body*. The more I see of the future of young men that go out from these walls, the more it is brought home to me that professional success, and success in all the learned callings, depends largely upon the vigour of the body, and that the men who win great professional distinction have that as the basis of their activity." Now, if young men must depend for success in life upon the "vigour of the body," is it not equally important for young women, who are to be their competitors in the learned professions, and in various departments of business, but what is still more important, who are to be, in the broadest and fullest sense, the "educators of the race"?

ART. IV.—MENTAL RESPONSIBILITY AND THE DIAGNOSIS OF INSANITY IN CRIMINAL CASES.*

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At the present day medico-legal cases are becoming very frequent, in which it is necessary to ascertain as to the insanity of a person accused of a criminal act, in its relation to his civil capacity and responsibility for criminal actions, and also as to feigned or concealed insanity. It becomes, therefore, a very interesting question as to what test of insanity the law should recognise as a valid defence in criminal cases. This question, although one which it seems difficult to settle satisfactorily, and which judges, lawyers, and medical experts are constantly disputing, assumes every day greater interest and wider significance, owing to the increase of insanity in our country disproportionate to the increase of population, which has taken place during the past twenty years, and which will continue to take place. Without inserting dry statistics, it is sufficient to say that a comparison of the increase of population from 1850 to 1870, with the increase of the number of the insane during the same period, reveals an increase of insanity over that of population of about 12 per cent. In the foreign elements this is due to marked changes in the habit of living, the changes of food, increased intemperance, working more indoors, living in badly ventilated tenements, and disappointments in not succeeding in business, &c., as they had expected to do in America, which are causes that, all combined, impair health, break down the nervous system, and tend insensibly towards insanity in the offspring. The increase of insanity among our own population is due largely to a change from the vigorous, well-balanced organisation, to an undue predominance of the nervous temperament, which is gradually taking place in successive generations. The educational pressure on the young to the neglect of physical exercise, the increasing artificial and unnatural habits of living, the great excitement and competition in business, are all tending to induce and multiply nervous diseases, many of which must terminate in insanity. These causes, and the evils resulting from them, are propagated by the laws of inheritance in an aggravated

* Read before the New York Medico-Legal Society.

and intensified form. Insanity is also appearing gradually at an earlier age than formerly. In former years the average period at which the greatest number became insane, ranged between the ages of thirty and forty, but an analysis of statistics shows that this average age is coming on at an earlier period, generally appearing between the years of twenty and thirty. This is owing to hereditary influences, which have gradually become intensified by the violation of physical laws during early life, want of proper training, or too high pressure in education, and is also due largely to the great mental activity and strain upon the nervous system that appertain to the present age and state of civilisation, and which tend to a rapid decay of the nervous system. With many persons it is but a step from extreme nervous susceptibility to downright hysteria, and from that to covert insanity. The question of mental responsibility in its relation to criminal cases is one of great interest, and presents a wide field for study and investigation. The facts of criminal psychology have led the writer to regard the impulse of criminal natures in the light of natural laws, and there is, beyond all doubt, an anthropological change which lies at the foundation of criminal propensities. There is a deficient cerebral organisation which lies at the foundation of these criminal natures, which occasions the disposition of an abnormal moral constitution. The dislike of work and the love of enjoyment are impulses which, when combined, lead especially to crime—when the ethic constitution or development is wanting which is necessary to the foundation of a powerful feeling of what is right.

A further fundamental element, which stands in psychophysical contrast to dislike of work, is an excessive physical consciousness of strength, which leads to arrogance, and thereby to the pleasure of measuring strength against the weak. This impulse leads to the love of bullying, cruelty, and murder, if the higher intellect is absent, which should turn the feeling of strength in a right direction, and there is also absent a complete ethical consciousness, which should prevent misuse of power. This ethical weakness may be congenital, as has been remarked, or it may arise from deficient education. In the domain of vices we meet with a peculiar condition of the central nervous system, which results in temporary criminal impulse returning with a certain regularity. Such criminals are temporarily seized with the deepest remorse, and are fortified with the best resolutions. They behave for a time in the most exemplary manner until they relapse again, which relapse is unanimously attributed by them to an irresistible impulse. This state of *moral epilepsy* is of great significance in the psychology of crime, as a physiologist is led to institute a comparison between such cases and

several states of disease, in which a peculiar type is observable, consisting in the fact that attacks of illness of more or less duration alternate with more or less long, and generally for a time preponderant, healthy intermissions. In a broad sense, one may designate all these pathological states as *epileptiform*, hence the term "*moral epilepsy*" which has been adopted above. Leaving this interesting question of the psychology of crime, we would ask if the true basis for jurists to proceed upon is not *the protection of the existence of normal persons against the ethically degenerate?* And the unnecessary degree of this protection is, most certainly, an essential measure for the severity of the punishment. The first trial of note where there was the question of insanity advanced, was in 1723, when the trial of Arnold for shooting at Lord Onslow occurred. Although it was shown that Arnold had been of weak understanding from his birth, and that he was doubtless insane, the jury brought in a verdict of guilty, and Arnold would have been executed had it not been for the intercession of Lord Onslow. The language of the charge to the jury in this case was in conformity to the rule laid down by Lord Hale, that partial insanity does not excuse a person from the consequence of his act, and that only a total deprivation of reason can furnish such excuse. In the year 1800 the celebrated trial of Hatfield, for shooting at the king in Drury Lane Theatre, excited much interest. Although it was proved that in 1793 Hatfield, who was a dragoon, had received a number of severe wounds which had caused partial insanity, so that he was dismissed from the service, and that since that time he had had periodic attacks of insanity, and had been confined as a lunatic, the prosecuting attorney laid down the established rule, that a total absence of memory and understanding could alone shield the prisoner from punishment, and appealed to the jury for a conviction on that ground. It was only through the brilliancy of the advocate (afterwards Lord Erskine) that the prisoner was acquitted. This trial had a good effect upon the judiciary, as in the year 1812, in the trial of Bellingham for the murder of Spencer Percival, Lord Mansfield laid down the law that the capability of distinguishing between right and wrong was the test for determining the prisoner's responsibility, thus discarding the old theory of an entire absence of all mental power and substituting this in its place. Afterward the theory of a general knowledge between right and wrong was modified, and the element introduced that the prisoner must know the difference between right and wrong at the time of, and with regard to the particular act for which he is on trial, in order to render him responsible, and this test has been preserved to the present time. In the early history of our own country, the same barbarism in the

treatment of the insane prevailed which darkens the pages of English history. In Governor Winthrop's History of New England, the case of Dorothy Dalbye is mentioned. She was executed for killing her child. She was, beyond all doubt, an insane woman, but this fact was not recognised by Governor Winthrop, who says of her: "She was so possessed with Satan that he persuaded her by his delusions, which she listened to as revelations from God, to break the neck of her own child, that she might free it from future misery." Such was the ignorance and prejudice of the early history of our country. We are at the present day very far from a correct understanding of the workings of the insane mind, for in the recent trial of Scannall the law was laid down as enunciated by the Court of Appeals in 1865, in the case of "Willis v. The People," which held that a person was not insane who knew right from wrong, and that the act he was committing was a violation, and wrong in itself. This theory of right and wrong is utterly inadequate to meet a large class of cases. There are certain cases familiar to all specialists in insanity which suffer from impulse in insanity with a homicidal or suicidal monomania. These patients, without appreciable disorder of the intellect, are impelled by a terrible *vis a tergo*, a morbid, uncontrollable impulse, to desperate acts of suicide or homicide. These patients are often fully aware of their morbid state, appreciate perfectly the nature of the act toward which they are impelled, and feel deeply the horror of their situation, and yet, if not prevented by restraint, will inevitably commit acts of suicide or homicide. A very remarkable case was under the care of the writer, of a man who would at stated times acknowledge that he felt an irresistible desire to kill some one, and would voluntarily enter an asylum and remain there until this morbid impulse had passed away, which was generally a period of one or two months. He has often told the writer that his life was made miserable by the idea that at some time this overwhelming impulse would come upon him so suddenly that he should commit some desperately homicidal act, but is not prepared to voluntarily incarcerate himself in an asylum for life, as his lucid intervals sometimes lasted for months at a time. The law as laid down at present would not decide this man to be insane, as he fully appreciates the difference between right and wrong, and the nature and consequences of any homicidal act that he may in the future commit. Such cases, which are not at all uncommon, serve to show what fearful injustice may be done under the name of justice, when the conclusion is based upon a metaphysical test which is proved by medical observation to be false in its application to the unsound mind.

There is still another form of insanity denominated "moral

insanity," in which the intellectual faculties are intact, no delusions or hallucinations existing, but where the moral sense seems utterly obliterated. Such persons have no true moral feeling. This is disorder of the mind produced by disease of the brain, and is an unquestionable form of insanity, as it often precedes other forms of insanity, in which intellectual derangement is well marked, as acute mania or general paralysis. In some of these cases there is a modified responsibility, the degree of such responsibility being determined by the particular circumstances of each individual case. One difficult but important question to be solved is the civil and criminal responsibility of women who plead insanity before courts of justice, and who are often afflicted with kleptomania, pyromania, or who are infanticides, as a result of sexual trouble and disease of the pelvic organs. Such women under all reasonable conditions are entitled to the benefit of the doubt, because of their defective mental integrity, caused perhaps by pregnancy, or by the subsequent emotional excitement attending parturition, which intensifies the cerebral disorder in a brain already morbidly active. With women, extreme nervous susceptibility readily lapses into insanity. In the sexual evolution, in the parturient period, in lactation, strange thoughts, extraordinary feelings, unreasonable appetites, criminal and suicidal impulses, may haunt a mind at other times innocent and pure. It is probable also that young unmarried women guilty of killing their own newborn offspring, are so distracted by conflicting feelings, sharpened to morbid acuteness by the great physiological movement of parturition, as to be hardly responsible for their acts. We come now to the question of the diagnosis of insanity. In most diseases we examine physical signs and symptoms, and determine by our senses the existence of such diseases. In insanity, on the contrary, we have to be guided chiefly by our knowledge of the normal functions of the mind, and in an examination have to rely on our intellect, rather than on our senses; although, of course, the latter are called in to assist us. It is, however, very often extremely difficult to decide with certainty, as medical experts are expected to do, as to the existence of mental disease. In making an examination of a person accused of crime, and in whom insanity is suspected, the person should be visited by the medical examiner, who should draw him into a pleasant conversation, and inquire as to previous attacks of insanity, hereditary history, then into any predisposing causes of insanity, such as intemperance, vocation, habit, &c., which may have operated in the production of insanity. Also as to injuries of the head or spine which may have occurred, sunstroke, &c. The nervous system should then be examined for the existence of any such

diseases as paralysis, epilepsy, catalepsy, or hysteria. The different senses, beginning with sight, should be examined, and in this way it may be discovered if there are hallucinations or illusions pertaining to any of the senses. A great many cases are on the border line which separates sanity from insanity, and it often requires the nicest discrimination to determine whether such a patient has passed this border line. The writer would suggest a series of eight questions, which, if adopted by jurists in criminal cases, would prove a most efficient and just test as to the existence of insanity in any given case, viz.:—

1. Have the prisoner's volitions, impulses, or acts, been determined or influenced at all by insanity, and are his mental functions—thought, feeling, and action—so deranged, either together or separately, as to incapacitate him for the relations of life?

2. Does the prisoner come of a stock whose nervous constitution has been vitiated by some defect or ailment calculated to impair its efficiency or derange its operations?

3. Has the prisoner been noticed to display mental infirmities or peculiarities which were due either to hereditary transmission or present mental derangement?

4. Has the prisoner the ability to control mental action, or has he not sufficient mental power to control the sudden impulses of his disordered mind, and does he act under the blind influence of evil impulses which he can neither regulate nor control?

5. Has the act been influenced *at all* by hereditary taint which has become intensified, so that the morbid element has become quickened into overpowering activity, and so that the moral senses have been overborne by the superior force derived from disease?

6. Was the act effected by or the product of insane delusion?

7. Was the act performed without adequate incentive or motive?

8. Does the prisoner manifest excitement or depression, moody, difficult temper, extraordinary proneness to jealousy and suspicion, a habit of unseasonably disregarding ordinary ways, customs, and observances, an habitual extravagance of thought and feeling, an inability to appreciate nice moral distinctions, and finally, does he give way to gusts of passion and reckless indulgence of appetite?

Some, or all of these are found generally in connection with transmitted mental infirmity. It may be argued that these mental defects signify not mental unsoundness, but human imperfection. Certainly if we take these manifestations, any

one of them singly and alone, we cannot claim such a one as invariably an indication of insanity; but, on the other hand, under certain circumstances, each one of them may be an unmistakable sign of insanity, or rather of a morbid cerebral state, which may readily lapse into insanity. The disappointments and calamities of life obviously act with greater effect upon an unstable mental organisation, these causes of disturbance meeting with a powerful co-operating cause in the constitutional predisposition. Sometimes a crime, even when there have been no previous symptoms to indicate disease, marks the period when an insane tendency has passed into actual insanity—when a weak organ has given way under the strain put upon it. There is a class of persons, with a peculiar, nervous temperament, who inhabit the border land between crime and insanity, one portion of which exhibit some insanity but more of vice, and the other portion of which exhibit some vice but a preponderance of insanity, and it is very difficult to form a just estimate of the moral responsibility of such persons, especially when we reflect upon the fact that moral feeling is a function of organisation, and is as essentially dependent upon the integrity of that part of the nervous system which ministers to its manifestations, as in any other display of mental function. The writer has met with cases in which, as a result of parental insanity, there has been a seemingly complete absence of moral sense and feeling in the offspring, and this has been a true congenital deprivation, or a moral imbecility, so to speak; of course such children can hardly fail to become criminals. In this connection it is interesting to note that moral degeneracy often follows as a sequence upon disease or injury to the brain. A severe attack of insanity sometimes produces the same effect, the intellectual faculties remaining as acute as ever, while the moral sense becomes obliterated.

When such persons are acquitted on trial of a criminal act on the ground of insanity, they should be remanded to medical custody, and should never be set at liberty until the medical superintendent of the asylum deems them fully recovered; but the commonest justice plainly indicates that such custodial restraint be of a medical and not of a penal nature. It is a very difficult thing for the laity to realise how sane a person may appear who all the while has a greater derangement than was even suspected until something happens to elicit the evidence of it, such as an attack of illness or severe mental strain, and some unconquerable impulse seizes him, and some homicidal or suicidal act results to the great surprise of everyone. In the same manner inebriety often appears in maturity as a result of ill health, mental shock, &c., and it becomes an

interesting question as to the degree of moral and criminal responsibility which attaches to inebriates, as inebriety often depends upon an abnormal organic development of the nervous system that has descended from generation to generation, gaining in intensity until it manifests itself in active inebriety; and there must certainly be a modified responsibility when homicidal or suicidal acts are committed during periods of such abnormal cerebration. In such cases a criminal act may be committed in consequence of cerebro-mental disease, without any apparent lesion of the perceptive and reasoning powers. In these cases also, the mental disorder is of a sudden and transitory character, not preceded by any symptoms calculated to excite suspicion of insanity. It is a transitory mania, or sudden paroxysm, without antecedent manifestation, the duration of the morbid state being short and the cessation sudden. In these cases the criminal acts are generally monstrous, unpremeditated, motiveless, and entirely out of keeping with the previous character and habit of thought of the individual. Such attacks are transient in proportion to their violence, and transition occurs in the completion of the act of violence. There is an instantaneous abeyance of judgment and reason during which period the person is actuated by mad and unconquerable impulses.

We will consider, finally, the medico-legal importance of epileptiform attacks, which may be partial in character, and which may not reach convulsive activity except so far as the mind is concerned. These attacks always display periodicity, and after the paroxysm there is an intermediate stage, during which, in most cases, the person remains in a confused state, perhaps for some hours, and is apt subsequently to retain only a vague and general notion of the preceding events. Thus in a homicide by shooting, the murderer would be likely to be roused by the sound of the pistol shot, and to remember it, although he would not very likely remember the altercation at all, or what passed between them. A case occurred recently of considerable interest from a medico-legal point of view, in which a murder was committed during an epileptiform seizure, or rather, more strictly speaking, during a state of transitory moral epilepsy, which was the result of a previous sunstroke, the immediate exciting cause being an attack of illness and the taking of a small quantity of alcoholic stimulus, which, it is well known, acts as a poison upon persons who have been sunstruck. This state of "moral epilepsy" is a morbid affection of the mind centres, which destroys the healthy co-ordination of ideas, and occasions a spasmodic or convulsive mental action. The will cannot always restrain, however much it may strive to do so, a

morbid idea which has reached a convulsive activity, although there may be all the while a clear consciousness of its morbid nature. The case just referred to had complained of pains in the head and sleeplessness, which had displayed marked periodicity, and which had been accompanied with great irritability of temper, excited by trifles and seemingly unconnected with personal antipathies. As has been previously stated, the person alluded to had been suffering from quite a severe illness, and after taking a small quantity of alcoholic stimulus went out to walk. He met a friend with whom he had been familiar for years, and a discussion arose as to the respective merits of certain politicians, when the discussion becoming excited, the man pulled out a revolver and shot his friend. He then went in a confused and dazed state and sat for some hours on a dock near a river, and subsequently went home, and burst into tears, and informed his wife of the sad occurrence, and gave himself up at the police station. There was no simulation of insanity by pretending to be incoherent, or by strange actions, and no attempt, either on the part of himself or wife, to pretend that the act was an insane one. There was, however, a total blank in the prisoner's mind respecting the events immediately preceding the pistol shot which seemed to have aroused his attention at the time, and he had no recollection of the fact that he had sat on the dock for some time afterward, as he was seen to do. The writer was consulted as an expert, and upon ascertaining the prisoner's previous history, gave it as his opinion that there had existed for months previous to the occurrence a profound moral or affective derangement, which, from its marked periodicity, was evidently epileptiform in character, and that the sudden homicidal outburst supplied the interpretation of the previously obscure attacks of recurrent derangement. There had evidently been induced by the sunstroke in this case an epileptiform neurosis, which had been manifesting itself for months, chiefly by irritability, suspicion, moroseness, and perversion of character, with periodic exacerbations of excitement, all foreign to the man previous to the attack of sunstroke. It is well known among specialists in insanity that this epileptiform neurosis often exists for a long time in an undeveloped or marked form, and that this neurosis is, moreover, connected with both homicidal and suicidal mania. Such attacks are often noticed to occur periodically for some time before the access of genuine epilepsy. I have often witnessed, in cases under my charge, abortive or incomplete epileptiform attacks, where there were no convulsions, and where there was no complete loss of consciousness. I have noticed in such cases either a momentary terror, slight incoherence, a gust of passion, or a mental blank, the patient perhaps stopping

in the middle of a sentence. The patient would then be himself again, quite unconscious of what had happened to him. Accompanying this confusion of ideas may be, as I have remarked, instantaneous impulses, either of a suicidal or homicidal nature. Owing to the writings of Hughlings-Jackson, Maudsley, Russell Reynolds, Hammond, Trousseau, Falret, Esquirol, and others, epileptic vertigo is a recognised disease. There is abundant testimony to show that during such seizures persons may perform actions, and even speak and answer questions, automatically. There are numerous examples in the works of the above authors, proving that in an unconscious condition persons can progress from odd or eccentric action to deeds of violence, suicide, or murder—being unable to remember the circumstances afterwards, and therefore irresponsible for their actions. This class of patients I have always found irritable, easily excited, very emotional without adequate external cause, easily losing their train of thought, and often unable to collect or fix their thoughts. Such cases have told me that they felt themselves changed in character, and have acknowledged that they often felt impelled to strange and violent acts by some power which they could neither understand nor resist. Such patients may entertain delusions of fear and persecution, and commit criminal deeds as a result of such delusions. When such cases, in their terror or distress of mind, commit some violent deed, they either experience immediate relief, as was the case with one patient under my care, who was only relieved by breaking out a pane of glass, when his paroxysm would subside, or they continued in a state of excitement, unconscious, or very imperfectly conscious, of the gravity of their acts. When they become conscious again, their memory is apt to be very uncertain as to preceding events. Griesinger says: "Individuals hitherto perfectly sane and in the full possession of their intellects, are suddenly, and without any assignable cause, seized with the most anxious and painful emotions, and with a homicidal impulse as inexplicable to themselves as to others." Maudsley says: "Let it be borne in mind, then, that there are latent tendencies to insanity which may not discover the least overt evidence of their existence, except under the strain of a great calamity, or of some bodily disorder, and that the outbreak of actual disease may then be the first positive symptom of unsoundness." The question as to the degree of mental responsibility attaching to such cases is one of great interest to psychologists, and also to jurists, and one to which it is hoped, in the future, much more attention may be directed than has been given to it in the past.

ART. V.—THE LUNACY LAWS.

THE Parliamentary Committee which sat during last year to inquire into the working of our Lunacy Acts has brought forth no fruit—as we suggested in a previous number, *ex nihilo nihil fit*. Mr. Dillwyn, who alone is responsible for the Committee, has introduced a Bill, but nothing has been as yet decided. We give the valuable remarks and suggestions of the Commissioners on the existing Lunacy Laws; these appear to fill a gap long existing, and should be carefully read and studied by all interested in the question of Lunacy.

“In the course of the Parliamentary Session of 1877, on the motion of Mr. Dillwyn, M.P. for Swansea, a Select Committee of the House of Commons was appointed ‘to inquire into the Operation of the Lunacy Law so far as regards the Security afforded by it against violation of Personal Liberty.’

“This Committee proceeded to take evidence, but had not made a final report at the end of that Session. It was therefore re-appointed in February 1878, and presented a final report to the House in the following month.

“It was with some satisfaction, but with no surprise, that we found that the Committee, after sitting 27 days to receive evidence, and examining a great number of witnesses, including the persons who had promoted the inquiry, and who held very strong opinions as to the objectionable and dangerous character of the present system, were able to report as their conclusion that, ‘Although the present system was not free from risk, which might be lessened though not wholly removed by amendments in the existing law and practice, yet, assuming that the strongest cases against the present system were brought before them, allegations of *mala fides*, or of serious abuses, were not substantiated.’

“Such language, guarded though it be, is, we repeat, not unsatisfactory to us, on whom necessarily rests much of the responsibility for the due administration of the Lunacy Law.

“Among other suggestions contained in the Report of this Committee, is one of the importance of which we have long been convinced, namely, that the existing Lunacy Acts should be consolidated.

“The Secretary of State for the Home Department having, since the presentation of the Report of the Select Committee,

informed the House of Commons that your Lordship has the amendment of the Lunacy Laws under consideration, we are perhaps justified in assuming that, in due time, Bills for the consolidation of the Lunacy Acts (a work advised by us as far back as 1868) will be presented for the consideration of Parliament. A proper opportunity will then arise for considering what amendments ought to be introduced, and due weight will, no doubt, be given to the recommendations of the Select Committee.

“For ourselves, we are not disposed to advocate any radical changes in the existing law regarding the care and treatment of the insane, and in particular, so far as our present experience extends, we are quite satisfied that the present system of certification, both of private and pauper lunatics, and of visitation of the asylums, hospitals, licensed and unlicensed houses where they are received, affords, in practice, ample safeguards as well against the admission of persons of sound mind, as for the discharge of the insane patients without undue detention.

“At the same time we are far from thinking that no improvements could be made in the existing regulations. On the contrary, our daily experience of the working of the Acts has induced us to note many points where amendment would be useful.

“The present occasion does not appear suitable for stating *seriatim* all these points. This could only be done on the preparation of Bills for consolidation and amendment; and indeed very many minor difficulties which have from time to time arisen on the construction of the Acts would disappear on re-drafting the faulty clauses, and further experience may, of course, show the desirability of other improvements.

“We think, however, that we may with propriety avail ourselves of this opportunity of suggesting, for your Lordship’s consideration, and in anticipation of any legislation, the following modifications of the present system as to the reception of patients under order and certificates, on which that system chiefly rests, and at the same time we may notice a few other, and perhaps the most important, of the miscellaneous amendments which we should be glad to see effected.

“1. And, first, as to Medical Certificates:

“The present form is certainly susceptible of improvement. The names of the persons (if any) furnishing facts indicative of insanity not observed by the certifier himself, together with their addresses, should be given. In the case of private patients it has long been our practice to require the names of informants, but we should be glad to have both names and addresses made a statutory requirement in all cases. The alterations we pro-

pose will appear more clearly from the form of certificate which we have caused to be drafted, and which will be found in the Appendix (P).*

“2. As to the Order for Reception:

“In private cases this is a mere request addressed to the person taking charge of the patient, to admit him into the asylum or other house. It might be well to substitute the word ‘authority’ or ‘request’ for the word ‘order.’

“As the law stands, the order in private cases may be signed by anyone who chooses to take the responsibility, and who has seen the patient within a month. He must state his relationship, or if no relation, ‘other circumstances in connection with’ the patient.

“It sometimes happens, though not very frequently, that in the urgency of the case no relative can be found to sign the order, which has therefore to be given by a friend or acquaintance, and indeed, occasionally, by a servant. Great exception has lately been taken to this, and where it can be avoided it is doubtless undesirable. At the same time we are bound to say that we are unable to recall any instance in which we have had occasion to question the good faith of orders so made.

“We should be loth to insist in all cases on the signature of a relative, for instances undoubtedly occur when immediate steps must be taken, and no relative can be found. For example, a foreigner, in good or fair circumstances, becomes insane, and unless his banker or agent, his fellow clerk, or the landlord of his hotel, comes forward to sign the order, he must be treated, to his manifest disadvantage, as a lunatic wandering at large, or not under proper care or control, and must be sent, through the police or a relieving officer, to a pauper asylum, with, in all likelihood, especially in London, a preliminary detention in a workhouse. We think, however, that the order or authority should state distinctly that no relative is available, and should give more precisely than by the present form is required, the reason for the signature. Added to this, power might be given to us to inquire into the circumstances of the signature, and to permit the substitution, as the person entitled to discharge, of some relative or other person willing to assume the responsibility, or of the person who makes, or proposes to make, the payments for the patient's maintenance. This would be in accordance with one of the recommendations of the Select Committee of the House of Commons. It should be expressly enacted that no minor should sign an order.

“By the Act 9 George IV. cap. 41, being the Act of Parliament which, up to 1832, regulated the care and treatment of

* See page 247.

the insane in licensed houses, it was provided that the person by whose authority a patient was admitted should, personally, or by a deputy specially appointed, visit the patient once at least in every six months, though no special penalty was imposed in case of non-compliance. A similar provision was inserted in the draft of the repealing and amending Act of 1832 (2 & 3 Will. IV. c. 107), but was struck out of the Bill by the House of Lords; and in 1845, when the present Act was passed, it was not re-inserted. Since then the principle has been adopted in the case of lunatics so found by inquisition, whose Committees enter into an undertaking to visit them periodically.

“Although in some recent and acute cases of insanity the visits of friends may have a prejudicial effect on the patient, and therefore a compulsory personal visit ought not to be insisted on from the particular individual who may have signed the order, yet we think that the principle is right which would enforce on the friends of patients the obligation to make inquiries after their welfare, and to ascertain from time to time that their treatment is proper.

“To enforce visits of this kind under a penalty would, we think, be impossible; but it occurs to us as feasible to subjoin to the form of the authority for reception, an undertaking by the person signing it to visit, either personally or by deputy, once in six months.

“The Select Committee made a recommendation as to such visits, adopting suggestions emanating from our chairman and another member of the Board.

“A draft of an ‘authority,’ embracing these suggestions, will be found prefixed to the draft of certificate in Appendix (P).*

“With regard to orders for admission of pauper lunatics, which stand on a different footing, a modification of the language of the 67th and 68th sections of the Act 16 & 17 Vic. cap. 97, and corresponding changes in the form of order, are, we think, needed, so as to make clear what we believe to have been the intention of the Legislature, viz., that the justice, or the officiating clergyman and the relieving officer, shall not merely (as we know is now often done) sign the order after reading the medical officer’s certificate, but shall be required to examine the lunatic in the presence of and jointly with the medical officer himself.

“No order of admission for a pauper lunatic should be made by an officiating clergyman and relieving officer, except after notice to a justice, and this should be made more distinctly than at present a condition of the validity of such order. The relieving officer should state in the order the reason why, after

* See page 246.

such notice given, the justice could not attend to examine the patient, or what reason exists for the patient not being taken to the justice for the purpose.

“These orders in their present form are on the face of them perfectly regular, even though no notice of the lunatic has in fact been given to a justice, and the form itself, we think, should therefore be altered.

“3. It would, we think, be advisable to extend the prohibition against the admission of private patients on certificates signed by certain relatives of the person signing the order, or taking the charge, to connections by marriage, as wife’s father or brother, stepson, or daughter’s husband.

“4. The so-called statement of mental condition of the patient forwarded to our office after two and within seven days subsequent to admission, should be made by Statute more precise than it at present needs to be so, as to constitute, in fact, an additional certificate. It should set forth, as a ‘certificate’ now does, the facts observed by the medical superintendent or attendant, leading to the conclusion that the patient is insane, and stating whether any improvement has been observed, and giving a succinct note of the main features of the case.

“The requirements of the present Acts are fulfilled if the medical officer gives merely the form of the mental disorder, and reports the bodily health to be ‘good’ or ‘indifferent,’ as the case may be, and most ‘statements’ contain little more, unless indeed some doubt exists as to the continuance of the insanity, when longer explanations are inevitable.

“From some asylums, however, and notably from the Worcester and the Wilts asylums, and from Brislington House, we receive ‘statements,’ giving concise particulars of health, especially the mental health of the patient, which we frequently find of great service.

“This ‘statement’ should be headed ‘First Report,’ and we accept the recommendation of the Select Committee, framed indeed upon a suggestion emanating from our chairman, that a second report of mental and bodily condition should in all cases be transmitted to us at the expiration of a month after admission of the patient.

“5. The Select Committee, while not pronouncing either for or against the continuance of licensed houses, advocate the extension of institutions of the character of the present registered hospitals.

“While of opinion that for the reception of the richer class of patients licensed houses under proper management are not unsuitable, and will continue to find favour with the friends of such patients, rather than *quasi* public institutions, we are

well aware that for persons of small means, and for the class removed a degree or two above the mechanic paid by weekly wages, an increase in the number of public institutions for the insane, adequately supported, would be a great boon.

“The Select Committee appear to think that establishments of this kind might be provided, in the first instance, by a compulsory charge on the county rate, as in the case of asylums.

“It is impossible for us to say whether or no such a proposition would find favour with Parliament or with the country; but we feel that any extension of the registered hospital system on its present basis must be accompanied by stricter provisions than now exist both as to foundation and as to management.

“While acknowledging the advantages which many of the existing lunatic hospitals offer, and while making no charges against the present management of any of them, for, as a rule, it is very good, we think that it is not too much to say that any one of these institutions, under the existing law, and in the hands of a weak committee, might easily be worked so as to become, instead of a philanthropic and charitable foundation, an establishment maintained mainly for the personal benefit of the resident staff, subject to none of the control exercised by commissioners and justices over the proprietor of a licensed house.

“To obviate these objections, and others which have from time to time arisen, we would suggest several provisions, of which the following is a summary:—

- (a) All hospitals where lunatics are received should be registered as at present, but applications for registration should contain a statement of the nature of the proposed hospital, who are the founders, what persons, and by whom appointed, are to form the Governing Body, what class of patients, and at what average payments, are to be received.
- (b) Plans of the building and estate should be deposited in our office.
- (c) Prior to registration the premises should be inspected, and a report made thereon to our Board.
- (d) Registration should be, primarily, a matter for the discretion of this Board, and should not be compulsory, as at present.
- (e) Should the Board decline to register the hospital, a statement of their reasons should be laid before the Secretary of State, who should decide absolutely whether the certificate, presently referred to, is to issue or not.

- (f) If the Board is satisfied with the constitution of the hospital and the building, &c., or is directed by the Secretary of State to register, a provisional certificate of registration should be issued, to be valid for six months, or until approval by the Secretary of State of the regulations to be proposed, as at present, by the Governing Body. During currency of the provisional certificate, the Governing Body to be at liberty to receive patients.
- (g) On approval of the Regulations, a complete certificate of registration to issue.
- (h) Within three months of passing of the Act, all hospitals, except Bethlehem, ought, we think, to deposit plans of land, of whatever tenure, occupied by the Governing Body, and on any new purchase or hiring of land, fresh plans should be deposited. No building in the occupation of the Governing Body should be deemed part of the hospital for any purpose connected with the care and treatment of patients, unless the same be situate wholly upon some part of the land of which plans are deposited. The reception of patients in any buildings not so situate should be a misdemeanour. The superintendent and all others concerned in taking charge should then be liable to the same penalties as persons receiving lunatics in an unlicensed house.
- (i) The accounts of Hospitals, audited by a public accountant, should be printed annually, and a copy sent to us, together with a list of names and addresses of members of the Governing Body, and principal officers, medical or otherwise.
- (k) Our Board should have power, with the previous consent in writing of the Secretary of State, given upon a representation from the Board, and after such inquiries as the Secretary of State might please to make, in case of wilful neglect of, or disobedience to, Regulations, to prohibit by sealed order the further reception of patients for a period not exceeding six months. At the end of that time further power should exist, with like consent, to order the Hospital to be closed.
- (l) No person directly or indirectly concerned in supplying the hospital with goods of any kind, and no medical officer thereof, should be a member of the Governing Body.

“6. As noticed in our thirtieth Report, the system of removing patients from licensed houses and hospitals to the seaside, or elsewhere, for a change, has extended much of late

years, and is a most beneficial arrangement, much to be encouraged, under proper checks.

“Several committees of hospitals and proprietors of asylums engage furnished houses at the seaside, to which, during the season, their patients are brought in relays. Such a plan was never thought of in 1845, when the Act 8 & 9 Vic. c. 100 was passed, and consequently some question has here and there been raised as to its legality.

“The practice, we think, should now be distinctly legalised, as it is greatly to the advantage of patients. It would not be difficult to provide against any abuse; as, for example, by requiring notice to be given to the clerk of the peace of the county that, under sanction of the Commissioners, Visitors, or Committee, as the case might be, two or more lunatics under certificates would for a specified time be brought to an unlicensed house within the county for change of air. Whereupon it might be competent to any two of the Visitors of licensed houses in that county to enter and inspect at their pleasure.

“As it is desirable that we should always be acquainted with the movements of patients, especially private patients, we should recommend that notice should be sent to us whenever leave of absence is given, on trial, or for the benefit of health, to any patient in a registered hospital or provincial licensed house.

“7. The death of a person in charge of a single patient, and the consequent requirement of a new order or authority, ought not, as at present, to involve the procuring of fresh certificates. This is often a hardship to persons of small means, and it, besides, occasions unnecessary disturbance to the patient himself. Power should, we think, be given to transfer the patient, but not without our previous consent, into the care of a person substituted for the deceased.

“8. There appears to be no reason why the present powers of the Commissioners to discharge a patient from an hospital or licensed house, on being satisfied that he is detained without sufficient cause, should not extend to a single patient.

“9. The provisions against ill-using and abusing patients should extend to make the carnal knowledge of a female patient by any officer, attendant, servant, or artisan employed in or about an asylum, hospital, or licensed house, an indictable offence.

“10. With regard to idiot children of the private and the pauper class, power should be given to relax, in the case of hospitals or licensed houses where idiot children and congenital imbeciles alone are to be kept, the rules as to residence of a

medical officer, and as to the constant entries in case books and medical journals.

“A few words added to the existing provisions on the subject would make it more clear than at present that justices can (if they desire) restrict the use of a separate or joint county Asylum to the reception of idiots and congenital imbecile cases. Express power might well be added to charge boards of guardians with the expense, not only of maintenance and clothing, but of the industrial training of these objects of compassion.

“11. Power should be given to appoint a substitute for a Commissioner temporarily disabled by illness or unavoidably absent. Such a power exists in the case of ‘the Lord Chancellor’s Visitors of Lunatics,’ and in that of the County Court Judges.

“Having thus briefly enumerated the principal of those amendments in the Lunacy Law which from time to time have occurred to us as desirable, we will, with your Lordship’s permission, proceed to notice, so far as appears to lie in our province, those recommendations of the Select Committee which have not been already touched upon.

“The Committee, after suggesting admission in case of emergency on a single medical certificate (which, we may remark, is already provided for in the case of private patients under the existing law), recommend (page iv of Report) that in all other cases two certificates should be required. This can only apply to pauper patients, and in every such case a magistrate can at present, if not satisfied, require two certificates. We should not object to make a second certificate compulsory, but we must point out that this would involve additional expense to ratepayers, and we do not ourselves think it necessary as a protection.

“We should raise no objection to the introduction into England of the Scotch law, that an order of reception should be valid for three years only, with a special report at the end of that time from the medical superintendent, to be repeated at the end of each subsequent year. (Report, p. iv.)

“The Committee (Report, p. v), without making a distinct recommendation for amending the law, dwell on the importance that detention should cease as soon as the patient is no longer dangerous to himself or others, and is not likely to benefit by further detention. They believe frequent and careful visitation to be the surest mode of guarding against unduly prolonged detention, with full power in the hands of the Commissioners to order discharge, and in the more general adoption of probationary discharge.

“The Committee have here omitted an important qualification,

viz., that the patient, though neither dangerous to himself nor to others, nor likely to benefit by further treatment, should not be of such habits as would offend against public decency or morality, if allowed to be *at large*. If remitted to the care of friends, they would of course be responsible for his conduct, and even where detention in an Asylum may no longer be proper, detention under certificates in a private house may still be necessary. It must always be remembered that the Committee discovered no cases of 'undue detention.'

"The Committee's remark as to probationary discharge applies (to judge by the context) rather to Scotland than to England, where discharge upon trial is an everyday occurrence.

"The Committee (page v) repeat, on the subject of the risk of mal-treatment by attendants, observations constantly made by us.

"A further suggestion is made (on page v), that reports should be sent to the Commissioners of patients 'kept under restraint' (we use the language of the Committee) in private families or religious houses, not for profit. The reports to be confidential, and the patients confirmed lunatics.

"We should be glad to see this suggestion pass into law; but the mere report would be of no use unless we had power to visit, and to some extent regulate treatment, as, for instance, by insisting on periodical medical visitation, and entries thereof in a book. The only way to secure any such registration would probably be that suggested by Dr. Nugent (Q. 2879-81, Evidence taken by the Committee), to make it penal for the medical attendant to refrain from reporting where the illness and consequent restraint or detention had lasted for a period of, say, six months.

"The recommendation (page v) as to visits by two medical men, to be sent by any person with the sanction of the Commissioners, to test the condition of any person under restraint, appears to require no alteration in the law to cause it to take effect, as the power exists.

"The opinions and suggestions as to workhouse management, expressed on page vi of the Report, we leave to the consideration of the Local Government Board.

"The Committee make a suggestion (Report, p. vi) as to the removal of restrictions on voluntary boarders, whose admission, they say, is to be reported to the Commissioners. The system of admitting boarders has answered well. We are quite prepared to extend it to any person who at any time has been an inmate of any institution for the insane, or has been a single patient (either as a lunatic so found, or under certificates). But we do not recommend the indiscriminate admission of

persons never certified as insane. The following objections may be sufficient :

“ 1. The fear of attempts at evasion of the law by introducing as boarders persons who ought to be under certificates.

“ 2. The fear of the introduction of mere drunkards.

“ 3. The fear of crowding the house to the inconvenience of the insane patients.

“ The previous consent of ourselves or the Visitors should remain a *sine qua non*. Notice of admission is thus scarcely necessary.

“ There can be no objection to the recommendation of the Committee (Report, p. vii.), that the grounds of refusal by superintendents to permit access to patients be entered in the case-book and communicated to us.

“ In spite of any evidence to the contrary which may have been brought before the Committee, we do not believe (and we conceive ourselves peculiarly well able to judge of such a matter) that any real grievance exists as to the detention of patients' letters under the present system, which requires all those addressed to us, the Visitors and Committees of Hospitals, to be forwarded unopened, the rest to be exhibited to the officials on their next visit. We may remark, parenthetically, that the Committee lay under some misconception as to the amount of labour occasioned by the examination of letters detained. The majority of them being obviously unfit for transmission, are easily dealt with on the spot.

“ We must very strongly object to the proposal of the Committee that all letters of patients not forwarded by the medical superintendent should be sent to us unopened. This would be a great grievance to the patients themselves. It is impossible that we should have in every case that full information as to the patient's exact state of mind at the time of writing, his family affairs, and other circumstances, which alone would enable us to judge whether a letter coherently expressed, and not containing matter of an obviously improper character, ought or ought not to be sent to the person to whom it is addressed.

“ If the letter were in the end kept back the patient would gain nothing; if it were posted it might not be until after several days' delay, and after critical examination in a public office.

“ The Committee themselves remark that it is plainly almost impossible to prevent the fraudulent suppression of letters. The scheme which they suggest will certainly not prevent it, supposing a medical superintendent thought it worth his while to suppress them.

“The Committee quote no evidence in support of their suggestion (page vii) that every person discharged from confinement should have access, with our consent, to all documents connected with his detention.

“If this were adopted we fear it would seriously check the free and unrestrained communication, both to us and to the medical superintendents and others, of information regarding cases which at present, as is well known, is treated as strictly confidential.

“A Bill before Parliament for amending the Medical Act will, if passed, provide for the acceptance of Scotch and Irish certificates in England.”

PROPOSED FORM OF AUTHORITY FOR THE RECEPTION OF A PRIVATE PATIENT.

I, the undersigned, being a person aged 21 years and upwards, hereby authorise you to receive A. B., a lunatic [1], whom I last saw at on the [2] day of 18 , as a patient into your house [3]. Subjoined is a statement of particulars relating to the said A. B., whom I undertake to visit personally, or by some one specially appointed by me, once at least in every six months while under care and treatment under this authority.

(Signed) Name.
 Rank or profession (if any).
 Full postal address.
 Degree of relationship (by blood or marriage) to patient.

[If not a relation, the person signing to state as briefly as possible: 1. Why the authority is not signed by a relation.
 2. His connection with or interest (if any) in the patient, or the circumstances inducing him or her to sign.]

Dated this day of 18 .

To , Proprietor or Superintendent of House [4]
 [or Hospital].

[1] Or an idiot, or a person of unsound mind.

[2] Some day within a calendar month from the date of the authority.

[3] Or hospital.

[4] Describing house or hospital by situation and name.

STATEMENT OF PARTICULARS.

(As in Schedule A., No. 1, 16 & 17 Vic. c. 96, with slight variations.)

PROPOSED FORM OF CERTIFICATE.

I, the undersigned A. B., do hereby certify as follows :

1. I am a person registered under the Medical Act, 1857, and I am in the actual practice of the medical profession.

2. On the day of 18 , at [1] in the county [2] of separately from any other practitioner, I personally examined C. D., of [3] in the county [4] of , [5], and came to the conclusion that he is a [*lunatic*, an *idiot*, or a *person of unsound mind*] and a proper person to be taken charge of and detained under care and treatment.

3. I formed this conclusion on the following grounds, viz. :—

(a) Facts indicating insanity observed by myself at the time of examination [6].

(b) Facts communicated by others [7].

4. I make this certificate having first read the clause of the Act of Parliament printed below.

(Signed) A. B., of [8]

[Clause of Act imposing¹ penalties for wilful false statements in certificates.]

[1] Insert the name of the street or place, with number or name of house, or, should there be no number, then insert Christian and surname of occupier.

[2] City or borough, as the case may be.

[3] Insert residence of patient.

[4] City or borough, as the case may be.

[5] Insert profession or occupation, if any.

[6] If the same or other facts were observed previous to the time of the examination, the certifier is at liberty to subjoin them in a separate paragraph.

[7] The names and Christian names (if known) of informants to be given, together with their names and addresses.

[8] Insert full postal address.

ART. VI.—LUNACY IN ENGLAND.

THE thirty-third Report of the Commissioners in Lunacy has just been issued. We have great satisfaction in testifying to the intrinsic value of the matter contained in its pages.

At the present time, when so much preposterous nonsense is written in connection with Lunacy and the Acts of Parliament bearing upon it, both in the medical as well as public press, we welcome the contents of the Report, as being the result of experience obtained by gentlemen whose sole object is to study the welfare of the insane, and to superintend the general management of asylums and hospitals for those mentally afflicted, and not of outsiders, who as a rule are ignorant of the very elements upon which they profess to enlighten others.

The following summary gives the classification and distribution of patients on the Commissioners' register :—

Where maintained on January 1, 1879	Private			Pauper			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
In county and borough asylums	216	260	476	17,462	20,933	38,395	17,678	21,193	38,871
In registered hospitals . . .	1,422	1,298	2,720	69	48	117	1,491	1,346	2,837
In licensed houses :									
Metropolitan	1,058	862	1,920	174	382	556	1,232	1,244	2,476
Provincial	790	825	1,615	238	316	554	1,028	1,141	2,169
In naval and military hospitals and Royal India Asylum . .	325	17	342	..	..	..	325	17	342
In Criminal Lunatic Asylum (Broadmoor)	184	49	233	190	60	250	374	109	483
In workhouses :									
Ordinary workhouses . . . .	..	..	..	5,014	6,683	11,697	5,014	6,683	11,697
Metropolitan district asylums	..	..	..	1,971	2,337	4,308	1,971	2,337	4,308
Private single patients . . .	192	280	472	..	..	..	192	280	472
Outdoor paupers . . . . .	..	..	..	2,378	3,852	6,230	2,378	3,852	6,230
Total	4,187	3,591	7,778	27,496	34,611	62,107	31,683	38,202	69,885

There were 202 lunatics found so by inquisition, which are not included in the summary given.

Private patients have increased in county and borough asylums by 13, in registered hospitals by 40, and in licensed houses by 63.

Pauper patients have increased in county and borough asylums by 1,098, in registered hospitals by 19, and in licensed houses by 16, decreasing, however, in ordinary workhouses by 162, and in the Metropolitan Asylums of Leavesden, Caterham, and Darenth by 98. Both these statistics refer to a comparison between private and pauper patients on the register of January 1, 1878 and 1879.

The statistical tables are now given which were commenced ten years ago and have gradually and progressively been improved and added to.

Of the various causes for Insanity intemperance is again at the head of the list, and stands out *per se* with a large proportion of cases. Among the others may be mentioned venereal disease, self-abuse, overwork, change of life and puberty, previous attacks, sunstroke, &c.

The total number of patients in asylums and as "single patients" on January 1, 1879, was 47,650, of whom 4,187 males and 3,591 females were private patients, and 18,133 males and 21,739 females were paupers. The total admissions during 1878 were 15,102, but 10·14 per cent. of these were transfers.

Out of 8,796 discharged from asylums, 5,332 are returned as recovered, showing a large proportion, and during the year 4,715 patients died in asylums.

On January 1, 1878, there were 17,116 males and 20,647 females in county and borough asylums, and the admissions during the year were 11,604 (5,807 males and 5,797 females). Out of 6,471 discharged, 4,247 are registered as recovered.

The recoveries during the year as compared with the admissions are at the rate of 40·3 per cent. for both series.

The Commissioners pass on to consider the improvements which have taken place at the various public asylums.

A new asylum is to be erected in Essex, at a cost of £65,000. It is to provide accommodation for 150 patients of both sexes.

The county asylum of Derbyshire is to be enlarged. An auxiliary asylum is to be built in Gloucestershire, and also one in connection with the Lancaster, Prestwich, Rainhill, and Whittingham Asylums.

In consequence of the termination in the lease of about 40 acres of land occupied by the Committee of Visitors of the Leicestershire and Rutland Asylum it is proposed to remove it to another site. Improvements are to be made at Hanwell and Colney Hatch.

The Commissioners comment severely on the unhealthy locality of the Hull Asylum, which never appears free from some

epidemic, and suggests its removal to some healthy locality: "We cannot sufficiently deplore the inactivity which permits the continuance of the asylum on this unhealthy spot."

The following suicides have occurred, particulars of which we give *in extenso*:—

"W. R., a man 71 years of age, was admitted into the Bucks County Asylum on December 28, 1876. This was the second time he had been placed under treatment in an asylum. He had never been considered suicidally disposed, nor shown any signs of violence either towards himself or others, and was in consequence trusted to go into the garden alone, and even on some occasions had been permitted to go to Aylesbury unattended to visit his friends. In the garden of the asylum there is a space about 80 yards square, enclosed by a boarding 4 feet high, and in the boarding is a door fastened by a padlock, and kept locked. This space is used for propagating plants and cuttings, and there is in it also a water tank, enclosed in brickwork, which is capable of holding water to the depth of rather more than two feet. This tank was covered by a frame, and able to be secured by a padlock, which it was the gardener's duty to see was in proper order and duly fastened.

"On Sunday, May 5, W. R., after attending Divine service, obtained leave to go into the garden, where he was left by himself. As he did not return to his dinner, a search was instituted, and he was found drowned in this tank. He had got over the boarding which surrounds the tank, where he found the cover of the tank not properly secured, and was thus enabled to destroy himself. The gardener stated in his evidence before the coroner that he had taken the padlock from the tank to fasten the gate with, as the one attached to the gate was out of repair. The verdict of the jury did not attribute blame to anyone, but we felt that some serious notice ought to be taken of the gardener's conduct, as it was owing to his carelessness and neglect of orders that the patient had the opportunity of committing suicide afforded him, and we expressed our opinions on the matter to the Committee.

"At the County Asylum at Chester, in March 1878, a patient named J. L. was admitted, the statement of particulars describing him as subject to epilepsy and of suicidal propensities. He was sent to the ward set apart for such cases.

"On May 21 he was in a restless, anxious state of mind. He ate his dinner and returned to the ward. It was then the attendants' dinner hour, and the charge attendant was left by himself in the ward. Expecting in a few minutes to be called to his own dinner, he placed his knife and fork in the breast pocket of his coat. He was walking down the corridor,

talking to and endeavouring to quiet the patient, when the latter suddenly seized the knife from the attendant's pocket, and then and there cut his own throat. The attendant, with the assistance of some of the patients, wrested the knife from J. L.'s hand, and immediately summoned medical assistance, which was speedily obtained. In spite of treatment, death ensued on the 24th of the month.

"It appearing that the number of attendants for the ward in question was only three, while the patients placed there amounted to 37, mostly of the epileptic and suicidal class, an arrangement which explains how all the patients were left during the dinner hour in charge of one man, we urged upon the Committee of Visitors an addition to the staff. At the visit of our colleagues in July, it was found that our recommendation had been adopted, but it was then suggested that the table knives for attendants ought either to be secured immediately after meals in a locked box placed in the messroom; or, if left in the attendant's hands, to be kept in the bedrooms, and they should have proper cases.

"W. M., admitted into the asylum on November 1, 1876, died on November 15, 1878, in the following circumstances.

"This patient was an epileptic, and at times subject to fits of great excitement. On November 14, after dining, he, without any reason, went across the room and struck one of the patients. Four attendants then removed him, struggling violently, to another ward, when, immediately on being loosed, he seized a chair and turned upon the attendants, who ran away and shut the door after them, leaving W. M. alone in the ward. On looking through the keyhole he was seen beating the table with the chair. Assistance was called, and six attendants entered the ward No. 12; the patient then ran away into a passage, where he again turned and attacked the attendants. He then rushed up a staircase, and, on reaching the first landing, turned round and held the attendants at bay. One of the attendants telling the others to follow him, picked up a chair, and carried it, legs upwards, towards the patient. There then appears to have been a severe struggle, W. M. and the attendants eventually falling 'all in a heap' on the stairs, the deceased being beneath the others. He was then conveyed to a ward, struggling all the time. Shortly after this he had a severe fit in the presence of the head attendant, who had by this time been summoned, and who did not see any reason to report the occurrence to the medical officers till seven in the evening, as there were no signs indicating that the man had been injured in the struggle, though he had been very sick and had gone to bed

about four o'clock. On being visited by the medical officer at seven, no special indications of serious mischief were observed, but shortly after symptoms of collapse appeared, and the patient died early on the morning of November 15. The *post-mortem* examination disclosed rupture of the abdominal aorta and small intestines.

"On reviewing the circumstances of this case, it seemed to us that there had been a great want of judgment on the part of the attendants in placing this patient, in the first instance, in the empty ward, where he was able to obtain possession of the chair, which in his hands became a dangerous weapon, and where he was in a position to effect mischief. Had the patient been placed at once in a single room, the consequences which actually resulted could not have ensued. We also considered that, in not reporting the occurrence to one of the medical officers with as little delay as possible, the attendants had committed a breach of the existing regulations for the government of the asylum, for which they should be severely reprimanded. We strongly recommended that a further regulation should be made, requiring the head attendant at once to report to the medical superintendent, or a medical officer, any case of violence which might come to his knowledge. It ought not to be left to the discretion of a head attendant, however deserving of general confidence, and of whatever length of experience, whether to report such occurrence or to refrain from reporting.

"Owing to the neglect of an attendant to close the door of a pantry, where she had placed the knife and fork she had just used in cutting up the dinners of the patients belonging to the ward, a female patient at the Rainhill Asylum was enabled, unperceived, to obtain possession of a knife, and to retire therewith to a water closet.

"She was missed almost directly, and was very quickly found, but not soon enough to prevent her from cutting her throat, and that so severely, as to cause her death on the following day, November 15.

"This patient, though not stated on her admission in August 1878 to be suicidal, had been an inmate of the asylum on a former occasion, and from her antecedents and depressed state of mind, was kept under more or less close observation, and was not entrusted with knife or scissors.

"The attendant to whose carelessness this suicide was due, had been for two years and a half a good servant of the asylum, and shortly before the fatal occurrence had been assaulted by two violent patients, producing, not unnaturally, a certain amount of 'flurry.' In all the circumstances, Dr. Rogers thought it sufficient to point out very strongly to the

attendant the deplorable consequences of her neglect, and to transfer her to another ward, where the patients require less constant vigilance.

“At the Whittingham Asylum there have been three deaths by suicide in the course of the past year.

“In the first instance, a male patient, E. K., destroyed himself on March 7 by poison, which he obtained in the following way. The patient was suicidal, but apparently much improved in mental condition. He was employed in the joiners’ shop, and on the day named was engaged in assisting Walter Walsh, who was the foreman joiner at the asylum, in some work at the superintendent’s house. Some of the wards being infested with rats, the superintendent had procured rat poison for the purpose of destroying them. A portion of this poison was, from time to time, given out to Walsh, with instructions to place it in the rat holes after all the patients had retired to bed, and to remove, early in the morning, any of the poison that might remain.

“From Walsh’s evidence, taken on the coroner’s inquest, it appeared that he had in his coat pocket, on March 7, a box of the rat poison; that he took off his coat and threw it on the ground when at work at the superintendent’s house, and forgetting the presence of the poison, subsequently asked E. K. to get him a tool out of a pocket of the coat. In doing this E. K. obtained possession of the poison, some of which he took, and he was shortly afterwards found in a closet by an attendant, who noticed that he was trembling and that there was vomit on the flags. The medical officers were summoned, and suspecting that the patient had taken an irritant poison, applied the usual remedies, but about midnight E. K. died.

“Walsh stated in his evidence that he had got the box of poison from a cupboard in the joiners’ shop, and placed it in his pocket on the Monday preceding March 7 (which was a Thursday), and that he had kept it in his pocket during the interval.

“There appeared to us to have been a very censurable degree of negligence on the part of Walsh, who had been made fully acquainted with the patient’s suicidal propensity. We called the attention of the Visitors to the case, and subsequently learnt that Walsh had been ‘severely reprimanded for his conduct.’

“The second case was that of a female patient, M. B., aged 74 years, admitted into the asylum in February 1878, and who committed suicide there on July 23. She had not been suspected of suicidal tendencies, and had been placed at night in a single room. In the early morning of the day just

mentioned, she was found dead, having hung herself by a handkerchief and the string of an apron, which she had concealed, to the bar of the window, the glass of which she had broken during the night.

"The third death by suicide at the Whittingham Asylum was that of a male patient, admitted on May 4. As he was described as suicidal he was placed in the special dormitory (containing 67 patients) at night, from the date of his admission up to the 17th of the same month, when, owing to his noisy habits and disturbing the other occupants of the dormitory, he was transferred to a single room adjoining, which admitted of constant inspection through a window in the panel. The next night, the 18th, he was again placed in the single room, and his hands were put into locked gloves to prevent self-injury. He was seen standing near the window by the attendant about 11 P.M., when he asked to have his gloves removed. This was not done, and the attendant went to the other end of the dormitory to assist a man in a fit; after that he returned to the room occupied by the patient, and, finding him in bed, went in to see him, and then discovered that he had torn a strip off his sheet and had contrived to fasten it round his neck. He died about 11 P.M., almost immediately after the strip had been removed. The night attendant in charge of these 67 epileptic and suicidal cases had no assistance except that of a patient. We expressed a strong opinion that there ought to be two competent paid night attendants for a dormitory containing so large a number of patients of such a class, but in the circumstances we did not consider that any blame could properly be attached to the attendant.

"Besides these cases of suicide two other deaths at the Whittingham Asylum deserve mention. A male patient, aged 64, died on March 15 from the effects of injuries received by falling from a window of the infirmary. The coroner's jury considered there was no evidence to show that the patient intended to destroy himself, but that he might have been merely attempting to escape from the asylum.

"The size of the pane of glass through which the patient fell was 19 by 15 inches, and only one pane was broken. The medical superintendent informed us that no similar casualty had taken place since the opening of the asylum. The windows, however, containing these large panes of glass have been protected, since the occurrence of this casualty, by slight rods of iron, which at a little distance escape ordinary observation."

Suicides have also taken place at Hanwell, Staffordshire, Wandsworth, Brookwood, Warwick, Yorkshire, Leicester, and

Newcastle-upon-Tyne Asylums. We are of opinion that many of the suicides taking place in these asylums are due to the reluctance for using moderate restraint which exists in some superintendents.

We also give particulars of two suicides which took place at two of our Registered Hospitals, Barnwood House and Coton Hill.

"The first to which we have to call attention was the case of a married lady, aged 57, who was admitted into Barnwood House on March 5, 1878, in a state of acute mania. She was not then reported by her husband as suicidal, but the nature of her delusions induced the authorities at Barnwood House to fear that she might become so. A written intimation to this effect was therefore given to the attendants, as well as verbal caution that due care should be exercised.

"On October 4 the patient rose in the morning and dressed. The attendant in charge asked if she was ready to come downstairs; she said she was. The attendant led the way downstairs, supposing that Mrs. D. was following her, with the four other ladies under her care.

"The attendant, after entering the sitting room and making the tea, noticed for the first time the absence of Mrs. D. Search was made, and she was found dead in a water closet, into which she had slipped unobserved. She was hanging by her small cambric handkerchief to the handle of the door.

"The coroner's jury attributed no blame to anyone.

"The other suicide to which we have referred took place at Coton Hill. Mr. N. was admitted a patient on Saturday, February 23, 1878. He was not described as suicidal in the statement accompanying the order for his reception, or in the medical certificates, but he was considered by the medical officers to be so disposed, for verbal instructions were at once given to the head attendant that he was not to be lost sight of. The patient slept badly during the night after his admission, but got up and dressed himself, and appeared quiet on the next (Sunday) morning. He had breakfast, and after it lay down to rest on a sofa in the breakfast room, an attendant named Edwin Rogers being then in charge. Rogers left the room, 'to prepare things for dinner,' as he stated, and Mr. N. took advantage of his absence to strip himself naked and then to throw himself through a window, breaking the glass, and falling down a height of 17 or 18 feet into the garden below. On taking him up it was found that he was bleeding profusely from a wound in the throat, caused during his passage through the window, or afterwards self-inflicted with a piece of the broken glass, and he died in the afternoon of the same day. A coroner's inquest was held, and after finding a verdict in accordance with the above

facts, the jury expressed their opinion that blame attached to Rogers for leaving deceased contrary to orders."

The following tabular statement shows the number of single private patients registered, and the changes which have occurred since the commencement of the year :—

	Males	Females	Total
Number, 1st January 1878 . .	188	286	474
Registered during the year . .	77	99	176
Discharged and removed . . .	55	85	140
" of whom recovered . .	6	14	20
Died "	18	20	38
Remaining 1st January 1879 . .	192	280	472

"Of these 472 patients remaining on January 1, 1879, 135, namely, 59 of the male sex and 76 of the female sex, were lunatics so found by inquisition, and placed by order of their committees in unlicensed houses, whose reception is notified to us under the provisions of the Act 25 & 26 Vic. c. 111, s. 22. This leaves as patients to be regularly visited by members of this Board 337 ; namely, 133 males and 204 females.

"Besides these, there are 202 other lunatics so found by inquisition, who are understood to be residing with their committees.

"Thus, in all, there were, on January 1, 1879, 337 such lunatics residing elsewhere than in asylums, registered hospitals, and licensed houses.

"The removal of a large number of chronic lunatics from hospitals and licensed houses, with a view of placing them in private abodes, has been occasionally advocated as a measure likely to be advantageous to the patients.

"There may be many cases now in establishments for the insane no longer needing active treatment, or very constant supervision, who might receive sufficient attention and care at their own homes, in charge of their nearest relatives, if these were able and willing to receive them ; but as to 'single charge' by strangers, all our experience goes to this, that although in favourable circumstances patients so placed are made happy and comfortable, yet that a large number of them are less well looked after, and are not better satisfied with their position than they would be in an asylum or other institution.

"The fact is that persons really well qualified to take charge of the insane, and willing to do so for a pecuniary recompense, are comparatively few ; fewer still are those who would accept such charge at the low rates often current in licensed

houses and hospitals, where not only do the poorer patients participate as a matter of course in many luxuries provided for the richer, but where both rich and poor can be maintained and treated at less cost than singly by reason of their aggregate number."

Infringements of the lunacy law has been met with the immediate action of the Commissioners in Lunacy. In several of these instances prosecutions have been initiated.

Various attendants have been fined and prosecuted for ill-treating patients, and instances are given of the detention of persons of unsound mind in unlicensed houses without the necessary certificates.

The Commissioners now pass on to consider the Report of the Lunacy Committee appointed last year, and make some valuable remarks on the consolidation and amendment of the Lunacy Acts to which we refer in our chapter, "Lunacy Laws."

Mr. Wilkes and Mr. Campbell have resigned their appointments as Visiting Commissioners, though still remaining on the Board as honorary Commissioners, and Dr. W. Rhys Williams and William Edward Frere, Esq., have succeeded to these posts. The two former gentlemen have done valuable work in the lunacy cause, and it is a great satisfaction to know that though free from the active work of a Commissioner, they will, from their long experience, render great assistance in any question before the Board.

This excellent Report concludes with the usual statistical tables of asylums and notices of the public hospitals visited.

We are of opinion that the information and data here contained are of the greatest value, and, as we have previously stated, are the result of experience.

ART. VII.—LUNACY IN SCOTLAND.

THE twenty-first annual Report is before us on the condition and management of lunatics and lunatic asylums in Scotland. Since the last Report was issued, Sir James Coxe, one of the Medical Commissioners, has died, who for more than twenty years was on the Commission. Dr. John Sibbald has succeeded him.

On January 1, 1879, there were 1,578 registered as private patients and 7,751 as paupers.

A number of interesting statistical tables are given, and on the comparative prevalence of insanity in different localities the Commissioners make the following remarks :—

“It might be expected that the statistical data possessed by the Board would afford the means of ascertaining in which localities insanity occurs most frequently. But the reasons for placing persons upon our registers are so various, and involve so many considerations irrespective of the question of insanity, that no conclusive inferences can be drawn from the facts furnished to us in regard to that question. The statistical data on which perhaps we can most safely rely in studying the distribution of insanity are those furnished by the classified tables of deaths given in his annual reports by the Registrar-General. Even these data, however, can only be regarded as a trustworthy basis for broad and general inferences, and we wish to guard ourselves from being supposed to attach more significance to them than they really possess. We by no means regard them as affording absolute information as to the amount of insanity either in the country as a whole, or in any part of it.* The following remarks, however, will show how the data supplied by the Registrar-General may throw light on questions relating to the amount and distribution of insanity. The kind of inference which may be safely drawn from them is, that a persistently high rate of mortality in a district is an indication of a greater prevalence of disease in that locality than exists in a district characterised by a persistently low rate of mortality; or it may also be safely inferred in regard to any large class of diseases, such, for example, as diseases of the chest, that a persistently high rate of mortality attributable to chest diseases is an indi-

* The certificates of death from which the Registrar draws his facts do not necessarily, in cases of death among the insane, give any indication that insanity had existed. The majority of those who die in asylums are returned as dying of diseases having no special connection with mental disorder. But this, it will be seen, in no way affects the argument used in the text.

cation that diseases of that class are specially prevalent there. We should not, of course, be justified in assuming that the number returned as dying of chest diseases indicates the total number who suffer from chest diseases; for we know that chest disease will be found in such a locality affecting a great many persons in whom it does not prove fatal. But if the inquiry were made in what localities does difficulty of breathing, or cough, or any other disturbance of function which is intimately associated with chest disease, exist most extensively among the population, we should be justified in selecting those localities where the deaths from diseases of the chest are reported in specially large proportion. And we should not consider this inference disturbed in any important degree by the fact that difficulty of breathing or cough is occasionally symptomatic of diseases of the nervous or digestive, rather than of the respiratory systems. The same reasoning is, of course, applicable to nervous diseases. We may take it as an admitted fact that mental disorder is inconsistent with a healthy discharge of the functions of the brain and other portions of the nervous system—that it is a symptom of a morbid condition of some portion of the nervous system—and we may therefore infer that mental disorder will be most frequent where diseases of the nervous system are most fatal. We have no data to indicate what proportion of persons labouring under diseases of the nervous system exhibit mental disorder, nor is it necessary here to inquire what that proportion may be. It is sufficient for our purpose that there is no reason to suppose that the proportion in one locality will differ materially from the proportion in another locality. Hence, if in any locality we find the number of deaths from diseases of the nervous system persistently large year after year, we may with fairness conclude that mental disorder, and the other manifestations of disordered nervous system, will be exhibited with proportional frequency in that locality.

“If, proceeding upon this view, we refer to the Report of the Registrar-General for Scotland (Twentieth Detailed Annual Report, 1878, pp. xxxii–xxxiii), we find in the analysis of the number of deaths, that according to the character of the localities in which they occurred, diseases of the nervous system are said to have proved fatal in every 100,000 of the population in the following proportions:—

In the eight principal towns.	.	.	.	.	.	250
„ large towns	.	.	.	.	.	271
„ small „	.	.	.	.	.	203
„ mainland-rural districts	.	.	.	.	.	175
„ insular-rural „	.	.	.	.	.	111

“These figures, which do not differ much from those of previous years, indicate that nervous diseases are exceptionally

more frequent in densely populated districts, and we think they may also be accepted as indicating that insanity, which is one of the manifestations of nervous disease, exists to a greater extent in urban than in rural districts. We may refer, in support of this conclusion, to our Eighteenth Report, pp. xiv-xviii, where we gave the results of a careful inquiry into the statistics of one of the most easily recognised and most fatal of the nervous diseases that produce insanity, and showed, by analysis of all the cases reported to us since 1858, that the urban populations yielded cases of that disease in much larger proportion than the rural populations."

Some valuable data are given in reference to the increase of insanity both in England and Scotland, and the facts are worthy of our careful consideration.

"The increase in the number of persons registered as lunatics, which has been going on ever since the legislature established the present systems of administration, is a fact that is worthy of attentive consideration. Since 1859 the private lunatics registered in England have increased from 4,980 in 1859 to 7,692 in 1878, or from 25 to 31 per 100,000 of the population; and the pauper lunatics have increased from 31,782 in 1859 to 60,846 in 1878, or from 161 to 245 per 100,000 of the population. In Scotland the increase has been, for private lunatics, from 1,035 in 1859 to 1,468 in 1879, or from 34 to 41 per 100,000 of the population; and for pauper lunatics, from 4,980 in 1859 to 7,690 in 1879, or from 164 to 214 per 100,000 of the population. The total increase in England has been for each 100,000 of the population from 187 in 1859 to 276 in 1878; and in Scotland from 199 in 1859 to 255 in 1879.

"The history of the increase in Scotland is instructive. As regards private patients the increase of their number is easily accounted for. It depends almost entirely upon the circumstance that the Act of 1866 (29 & 30 Vic. c. 51, sec. 17) for the first time placed the supervision of lunatics having judicial factors directly under the supervision of the Board. The addition to the number of registered private patients due to the legislation of 1866, just referred to, consists almost exclusively of patients who are not in asylums. If we confine attention to those private patients who are in asylums, an examination of the numbers does not show any increase beyond what is accounted for by the increase of population in the country. Ninety-five per cent. of the lunatics annually added to the register are placed in establishments, only 5 per cent. being otherwise provided for. In other words, so large a proportion of lunatics annually added to the register are placed in establishments, that we may approximately estimate the annual production of registered lunacy by the number of persons admitted to establishments. By

dividing the period from 1859 to 1878 into quinquennial periods the rate of increase, both of private and pauper patients, may be seen in the following statement.

Quinquennial Periods	Admissions to Establishments during twenty years, 1859-78			
	Average Annual Admissions		Proportion per 100,000 of Population	
	Private	Pauper	Private	Pauper
From 1859 to 1863 . . .	394	1,030	13	34
„ 1864 „ 1868 . . .	413	1,164	13	37
„ 1869 „ 1873 . . .	438	1,463	13	44
„ 1874 „ 1878 . . .	479	1,784	14	50

“During the year 1878 the number of admissions per 100,000 of population was 13 for private patients and 53 for pauper patients. The increased annual production of registered lunacy we thus see to have been entirely due to the increase of pauper patients; the annual admissions of these per 100,000 of the population having increased 56 per cent. during the twenty years.

“The total number of pauper patients resident in establishments has increased from 3,103 in 1859 to 6,292 in 1879, being an increase of more than 100 per cent. This is a greater increase than that of the aggregate number of pauper lunatics on the register, that is, of pauper lunatics both in establishments and in private dwellings; because during the same period those registered pauper lunatics who are provided for in private dwellings have decreased from 1,877 to 1,398. The pauper lunatics in private dwellings consist partly of persons who are intimated to us as lunatics by inspectors of poor and who are certified by the parochial medical officers as not requiring asylum treatment, and partly of pauper lunatics who have been discharged from asylums as no longer requiring asylum treatment but who continue to be maintained as paupers. During the ten years, 1859 to 1868, these patients decreased in number from 1,877 to 1,521, partly in consequence of a larger number of them being transferred to establishments than the number that were received from establishments, and partly by the decrease from deaths, from recoveries, and from ceasing to be paupers, being greater than the additions to the list of new cases. Since 1868 the decrease in number has not been so rapid, owing chiefly to the number received from establishments being greater than the number transferred to establishments. In 1875, however, the

year in which the parliamentary grant was first given in aid of the maintenance of pauper lunatics, this preponderance of the transfers from establishments decreased, and since then the average has been in favour of transfers to establishments. In 1875 there was also a considerable increase in the number of newly reported cases left in private dwellings. For the previous six years the highest annual number of such cases had been 74; in 1875 it was 138; in 1876, 132; in 1877, 90; and in 1878, 111. It has resulted from this that, although the interchange of pauper patients between private dwellings and establishments has increased the number of inmates of establishments at the expense of the number in private dwellings, the aggregate number of such patients has not diminished during the past five years.

“In discussing the history of the increase in the number of pauper lunatics in asylums, it will be found convenient to divide the period since the establishment of the Board into three sections. First, the period before the provisions of the Act of 1857 had so far taken effect as to bring into existence much of the new asylum accommodation which it was one of the objects of the Act to provide. Second, the period after the new accommodation began to be largely available till the parliamentary grant in aid of the maintenance of pauper lunatics was established. And third, the period since the grant was established.

“The first period may be taken as extending from 1858 till 1863, inclusive. During this period the number of pauper lunatics in asylums increased from 2,953 to 3,683. At first the increase was rapid, which may be regarded as a natural result of the establishment of a stricter system of supervision than had formerly existed, under which many patients who had been improperly cared for in private dwellings were sent to asylums. During the first two years, therefore, the annual increase was an average of 213 patients. During the subsequent four years the average annual increase was 76.

“The second period extended from 1864 to 1874, inclusive. During this period the number of pauper lunatics in asylums increased from 3,683 to 5,274. The first portion of this period was also distinguished by a specially large annual increase, the increase between 1864 to 1869 being an average of 174; and this is readily accounted for by the number of new asylums which were opened during those years, and which were both superior in construction and more conveniently situated than most of those previously existing. During the second portion of the period, comprising the five years from 1870 to 1874 inclusive, the annual admissions again fell to a lower number, the average for these years being 109. But if the year 1874, during which the increase was 186, be excluded from this period, we find the average annual increase for the remaining four years to

be only 90. And it would probably be only proper so to exclude it; for, although the grant was first actually given in 1875, it is believed that the expectation of receiving it had an effect upon parochial authorities in making them more willing to incur expense in providing for their lunatics. The average increase of 90 per annum would, upon that supposition, represent the rate of increase for the period after the provision of new and improved asylum accommodation had exhausted its immediate effect of encouraging an increased resort to asylum treatment for the lunatics in the several districts.

“The third period consists of the four years 1875 to 1878 inclusive. During this period the pauper lunatics in asylums increased from 5,274 to 6,292, being an average annual increase of 254, much the highest rate of increase since the establishment of the Board. There appears reason to believe that this greater rate of increase is to be attributed partially, if not wholly, to the influence of the parliamentary grant, in inducing parochial boards to admit lunatics more easily to the roll of paupers than before the aid from imperial sources was given.

“The increase during the periods which we have described is shown in the following tabular statement:—

	Pauper Patients in Establishments	
	Annual Increase	Number at the end of each Period
During 1858-59	213	3,379
„ 1860-63	76	3,683
„ 1864-69	174	4,728
„ 1870-73	90	5,088
„ 1874	186	5,274
„ 1875	257	5,531
„ 1876	242	5,773
„ 1877	267	6,040
„ 1878	252	6,292

“The increase during the last four years has been caused partly by an increased number of admissions to establishments, and partly by a decrease in the proportion of patients discharged. The admissions during these years have been an annual average of 1,835, instead of an average during 1870-73 of 1,462. And the annual average of discharges and deaths has been 1,595, instead of 1,381, which was the annual average during 1870-73. In other words, the discharges and deaths during the last four years have been 87 per cent. calculated on the admissions, instead of 95 per cent. as it was in 1870-73. These figures show not only a considerably increased tendency to place patients

as pauper lunatics in asylums, but also a decreased tendency to remove them from asylums.

“Establishments for the insane in Scotland arrange themselves in the following groups:—(a) Royal and District Asylums, (b) Parochial Asylums, (c) Private Asylums, (d) Lunatic Wards of Poorhouses, (e) Training Schools for Imbecile Children, and (f) the Department for Criminal or State Patients in the General Prison.

“In discussing the results of treatment, and noting the condition of individual establishments, it will be convenient to observe this grouping.

“The reports by the Commissioners of their inspection of the different establishments are given in Appendix E.

“In our last report we indicated the general nature of the changes which have taken place during late years in the structure and management of Scotch asylums, and in the manner of treating the patients. We showed that these changes had been chiefly in the direction of removing, both from the structure of the buildings and the mode of life of the inmates, some of the more distinctive features which were deviations from the conditions of ordinary life. In regard to the buildings we had to record the decreasing use of walled airing courts as places of exercise for the patients. Many asylums were then unprovided with such arrangements, and there were others in which, though they still existed, they were never used. In several instances the airing court walls had been pulled down; and in the case of no recently erected establishment had any walled airing courts been provided. The practice of surrounding the general grounds attached to asylums by high fences was also stated to be decreasing in frequency, in some cases the grounds which had been thus enclosed having been opened up, and no new fences having been recently erected for this purpose. We also drew attention to the fact, that the practice of keeping patients while indoors always under lock and key, had been undergoing important modification. In some asylums the key scarcely required to be used during the day, and in most the necessity for its use had greatly diminished. Greater liberty was also accorded to the patients by a larger number being permitted to go about on parole; and, in the medical treatment of the patients, the use of stimulants and narcotics was not so much resorted to as it had previously been. All these changes are in the direction of substituting moral for physical restraint, and of relaxing the discipline of asylums in its present aspect and introducing in its stead a greater amount of intelligent supervision and guidance.

“The changes which have taken place during the past year

have been in accordance with the spirit which dictated those of previous years, and we regard them as having conduced to the wellbeing of the inmates of the establishments in which they have been carried out. The practice of secluding patients in single rooms is resorted to in some asylums more than in others. It is still regarded as the most judicious mode of treatment for a certain class of cases, though it appears to be viewed by medical officers generally with decreasing favour. In some asylums it is seldom used, and its disuse is chiefly to be observed in those where mechanical restrictions have in other ways most notably diminished. Personal mechanical restraints are occasionally employed, but generally with the view of conserving the strength of the patients or preventing injury to themselves, rather than for the prevention of violence to others.

“Increasing attention appears to be given to the industrial occupation of pauper patients ; and one of the chief evidences of this is the acquisition by many institutions of additional land. During recent years a considerable extent has thus been acquired, and during the past year five establishments have added to what they had previously possessed. The Aberdeen Royal Asylum has acquired 3 acres ; the Edinburgh Royal Asylum, 50 acres ; the Elgin District Asylum, 61 acres ; the Buchan Combination Poorhouse, 11 acres ; the Cuninghame Combination Poorhouse, 31 acres. We record these facts with pleasure, because we regard the possession of a considerable extent of land as of great use to all classes of establishments where lunatics are detained. The benefits that it confers are of various kinds. It affords the means of healthy occupation invaluable as a curative agent in a large number of curable cases ; and it affords an opportunity of placing many chronic and incurable patients in conditions more nearly resembling the ordinary life of sane persons than can be obtained in any other way. One of the difficulties arising from the accumulation of a large number of the insane in an establishment is the necessity of organising the daily life of the community by a system of what may be described as artificial discipline. This discipline is directed to such desirable objects as the promotion of the recovery or improvement of the patients, to the enforcement of order, the prevention of escapes, and the provision of occupation and amusement. Such discipline cannot of course be dispensed with in a well-regulated asylum, and in the case of many of the inmates the presence of active mental disorder or hopeless mental decay, makes the discipline wholly beneficial in its influence. But the sense of tutelage which it suggests, and the frequent reminders which it involves, that those subjected to it are regarded as insane, proves injuriously irksome to many. It is consequently desirable to introduce as

much as possible into the daily routine of an asylum such arrangements as will easily commend themselves to the minds of such patients without suggesting ideas of discipline or treatment. The more a patient can be made to feel himself a voluntary agent rather than a person under tutelage, the more may his mental state be expected to be healthy. It is therefore desirable for a large number, especially of the pauper inmates of asylums, that their position should be assimilated, as far as possible, to that of members of an industrial community in ordinary life. In order to carry out these views asylums are generally provided with workshops and other means of industrial occupation. It is impossible, however, to provide more than a few of the occupations followed by the artisan class of inmates, and many such occupations, were it possible to provide them, would be unsuitable in an asylum, on account of their general unhealthiness or special unfitness as occupations for the insane. No occupation is found in practice to be so generally useful as outdoor labour. In agricultural districts it provides naturally for the employment of the large majority; and, in districts not especially agricultural, it is the occupation most easily resorted to by those who cannot be engaged in their own particular trades. It is chiefly, therefore, on account of the importance of introducing the industrial element largely into asylum organisation, and because the possession of a considerable farm affords the best means of supplying that element, that we approve strongly of asylum authorities providing an ample extent of land in connection with the establishments under their charge.

“These observations are applicable both to establishments devoted to the treatment of active or curable insanity, and those whose inmates are chiefly of the chronic and incurable class. The advantages of such occupation as a farm affords in promoting the recovery of curable cases are great, and are generally recognised. During the course of an attack of mental excitement such occupation has usually a beneficial influence, and this is often best seen when the ordinary occupation of the patient has been one whose hygienic conditions are less favourable. Experience shows also that, besides the direct benefits which the farm work confers upon the patients as a means of treatment, important collateral advantages are obtained by it. It facilitates the introduction of variety into the dietary of the patients; and the supply of vegetables and milk, which ought to enter largely into asylum dietaries, is generally made more abundant. When the farm is properly managed it is also found to be a source of profit to the institution, and therefore, in the case of public establishments, a means of diminishing the burden on the ratepayer.

“The advantages of a farm as a source of occupation are necessarily felt more in the treatment of men than of women. As providing a useful kind of work for females, an effort has been made in some institutions to develop the work of the laundry and washing house. It is desirable in many cases to have recourse to regular occupation in which a considerable amount of physical exercise is obtained, and for this purpose the work of the laundry and washing house is suitable. In some establishments the advantages of such work have been so far recognised that a considerable amount is accomplished for persons unconnected with the institutions, in addition to what is required for the institutions themselves.

“Though we insist strongly on the importance of the industrial element in asylum management, we do not undervalue the many other elements that have hitherto been regarded as important. Indeed, we believe that the presence of the industrial element in due proportion enhances the value and importance of the others. Good medical treatment, a comfortable and cheerful abode, the supply of nutritious food and suitable clothing, and opportunities for healthy recreation and amusement, are all in themselves useful and important in contributing to the health and happiness of the patients. And we have pleasure in recognising the willingness of local authorities in Scotland to make satisfactory provision for these requirements. But, in the case of patients whose condition renders them fit for it, these benefits can only be fully taken advantage of by those who are engaged in useful daily work. On the other hand, it is necessary that adequate provision for the comfort and happiness of the patients should be made, in order to enable them, while in an asylum, to engage successfully in industrial occupation. The several elements of good administration are not only desirable on their own account, but also because they are complementary to one another, each one facilitating the beneficial action of all the rest.

“The advantages of manual labour as a means of improving bodily health and affording rest to perturbed mental functions cannot be obtained so easily in the case of private patients as in that of paupers; and this, indeed, often constitutes an important difficulty in the treatment of private patients. Similar advantages are, however, sought to be attained by engaging private patients in amusements of a character which involves more or less physical exertion, and we are glad to note that commendable and successful efforts are made generally in asylums where such patients are received to provide such amusements.”

The condition of the various asylums is given, and the report on the whole may be pronounced as a great improvement on the one of last year.

ART. VIII.—LUNACY IN AMERICA.

REPORT OF THE WISCONSIN STATE HOSPITAL FOR THE INSANE.

THIS hospital was opened for the reception of patients in July 1860, and since that period the total number of admissions has been 1,377 males, and 1,264 females. Of this number 383 males and 368 females have been discharged recovered, or considerably more than one-quarter of the whole number, which speaks highly for the general treatment and management adopted in this institution. At the end of the fiscal year there were 393 in hospital, the whole number treated during the year being 530.

REPORT OF THE NEW HAMPSHIRE ASYLUM FOR THE INSANE,
JUNE 1879.

Dr. J. P. Bancroft is the able superintendent of this institution, and the visitors in their report speak highly of his management of it. On May 1, 1847, there were on the register 276 patients, of whom 132 were males and 144 females. The daily average from May 1, 1878, until March 31, 1879, has been 126 males and 143 females. We append the interesting remarks made by Dr. Bancroft on the duties of "attendants."

"Attendants.

"Sect. 1. In all their intercourse with the patients, the attendants are required to treat them with respect and civility; to be kind and gentle in manner, and avoid roughness of every kind. They must answer, as far as they can, the civil questions of a patient, and attend to every reasonable request. They must be calm and quiet under provocation, never scold, threaten, or recriminate, and make every request in a respectful manner.

"Sect. 2. In the care of the insane, sympathy, kindness, and tact should take the place of force and display of authority. But if at any time the use of force becomes a necessity, the *manner* of using it should take away its offensiveness; *and* force should never be resorted to without the presence of sufficient assistance to render a violent struggle unnecessary.

"Sect. 3. A cheerful look, a kind manner, a respectful demeanour, and expressions of sympathy will do much to quiet

the excited, and give the attendant influence and easy control over patients, and render duty easy and agreeable.

“Sect. 4. The opposition which the insane make often arises from delusions that lead them to believe they are to be injured in some way; and for this reason every effort to control them, to administer food, medicine, or baths, or do anything for them, should be made in the most kind and delicate manner, that their confidence may be secured and retained. On the other hand, cross words, angry looks, or violent acts destroy their confidence, and diminish their chances of recovery. No one must risk the consequences of such measures.

“Sect. 5. A blow or a kick is never to be inflicted on a patient by any *employé* under any circumstances. Any violation of this rule will be treated as a grave offence.

“Sect. 6. Mechanical restraint must never be put on a patient without the authority of a medical officer.

“Sect. 7. The attendant should be an example of good manners, avoiding all rude and ungentlemanly or unladylike habits not suited to the well-ordered household. They should treat each other and all with civility and politeness, cherish a high sense of obligation, and never forget the golden rule, to do by others as, in changed circumstances, one would wish to be done by. By these simple means the attendant is sure to gain, not only self-respect, but an easy control and personal influence.

“Sect. 8. Attendants should hear with patience and answer with caution; should never promise what cannot safely be performed, and having made a promise, be faithful in its execution.

“Sect. 9. The peculiarities of patients must never be made a subject of sport or ridicule, but rather withheld from publicity, with tender regard for their feelings and welfare.

“Sect. 10. The attendants must rise at the ringing of the morning bell, and at once commence the labours of the day. On opening the sleeping rooms of the patients they shall greet the occupants with expressions of kindness, see that they rise (if able), are properly dressed, washed, and prepared for breakfast at the appointed hour.

“Sect. 11. As soon as practicable after the patients have arisen from bed, the attendants must see that the night vessels are removed from the rooms and the beds thrown open for airing; and as soon as other duties will allow, they will remove all soiled bedding, and see that the beds are put in good order.

“Sect. 12. Immediately after breakfast the halls and patients' rooms must be made clean and put in good order, and so kept at all times. Scrupulous care must be given to the water closets, which will require frequent rinsing with hot

water, and the use of disinfectants. The same care must be taken of the wash bowls, and a sufficiency of clean towels must be at hand, as well as combs and brushes for the hair.

"The attendants will follow the same rule of cleanliness in the care of the halls, windows, spaces, back stairs, and dining rooms, never being satisfied until they are as clean as they can be made. Patients able and willing to assist in these labours are to be encouraged to do so, *but never compelled to work*. The attendants are held responsible for the complete execution of these requirements.

"Sect. 13. The attendants will ever be watchful of the state of the atmosphere in the halls, and report to the office any evidence of impurity which is beyond their power to correct otherwise.

"Sect. 14. The attendants must see that clean linen is put on each bed once in every week, and oftener if necessary; and if a sufficient supply of this or of towels is not at hand, the fact must be promptly reported to the supervisor.

"Sect. 15. The attendants must see that the tables are properly laid; that everything about them is perfectly clean, and that they are made as inviting as is practicable. During meals the attendants must always be present and wait on the table in a respectful and delicate manner, such as they would be willing to have adopted towards themselves under like circumstances. *Patients must not be hurried through their meals* to hasten the clearing of the table. The attendants must use special care that no knife, fork, or other article is carried from the table by any patient.

"Sect. 16. It is obviously improper for the attendants, after the hall work is done, to retire to their own rooms and leave the patients alone during hours of duty; their time and attention are due to the patients, and must be devoted to keeping them quiet and tidy, preventing improper conduct of every sort, or lapsing into listlessness and torpor; to efforts to preserve their self-respect, and to carry into effect the general direction of the physicians. These ends are to be sought by efforts to keep patients occupied, either in work, reading, games, or judicious social intercourse.

"Sect. 17. Visiting from hall to hall during hours of duty, without special business, or going away to other parts of the premises out of one's field of service, is wholly improper and not allowed.

"Sect. 18. The attendants are expected to know how every patient in their charge is employed, and to be vigilant, by every means in their power, to better the condition of every one.

“Sect. 19. The attendants must not allow a patient to be taken from the halls by anyone employed in other departments, unless a general or special permission from a medical officer to that effect has been given; nor will the patients leave the halls before breakfast or on Sunday without the same permission.

“Sect. 20. The attendants must always be alive to the welfare of those in their charge, and in the night hold themselves ready to rise and assist the night attendant, if the condition of a patient requires it. They will come to the office for medicines or instructions when needed, and follow all directions carefully. After giving medicines, they should wash and return the glasses *at once*.

“Sect. 21. If damage is done to buildings or property by patients, the attendants will report it to their supervisor.

“Sect. 22. The attendants are never to give up their keys, except at the office, on leaving, nor are they ever to admit strangers into the halls without special permission.

“Sect. 23. *The attendants will always take care that the clothing worn by patients is adapted to the season and the occasion. In case of sudden change from heat to cold, they must make at once the needed change in clothing.*

“Sect. 24. It is particularly expected of attendants to see that every patient is cleanly in person; that the hair and nails are attended to; that any rent in clothing is promptly mended; that the garments worn are kept buttoned or hooked; and that any stains from carelessness in eating are promptly removed. Each attendant should keep at hand a sponge and soap, and a small stock of sewing utensils, as needles, thread, buttons, hooks and eyes, &c., for immediate use when needed.

“Sect. 25. When the physicians visit the halls, one of the attendants must be at hand to give any information required, to accompany them to any patient's room, or render any other assistance needed.

“Sect. 26. Each patient will take a warm bath each week, unless made an exception by direction of the physician. In particular cases of weakness or special delicacy the sponge bath may be substituted for the tub; in such cases, as well as those who may desire to bathe more frequently, the attendant should apply to the attending physician for specific directions.

“The attendants must superintend the baths of patients, and not leave the halls with the bath rooms open (unless exceptions are made), and in no case must an epileptic or suicidal patient bathe without the presence of an attendant.

“Sect. 27. In suitable weather all patients who are able will go out for exercise, accompanied by their respective attendants, on such conditions as shall from time to time be prescribed.

In these outdoor exercises the attendants must see that no one strays from the party; and so regulate the speed of walking, or the character of other exercise, as to suit, as well as may be, the average of persons present. They must try to avoid all appearance of restraint, and seek to make these occasions as enjoyable as possible. Preference should be given to walks within the asylum grounds; but when walks are taken into the city, it is not permitted to visit stores, hotels, railroad stations, or other public places, except by permission previously obtained. In the airing courts the same rules for the care of patients will be observed as apply to the halls. The attendants must not allow any rubbish to accumulate on the ground of the courts.

"Sect. 28. The attendants must shave those patients who do not desire to wear the beard. In shaving, great care must be taken to have the razor in good order, and to shave easily and neatly. No other patient should be present, and the razors be kept under lock and key in the attendant's room.

"Sect. 29. The attendants, in their respective halls, will strictly observe the instructions of the superintendent in regard to the time for the patients' retiring; and in assisting them to bed they must practise the same delicacy and courtesy enjoined elsewhere in these rules. Before closing the doors for the night they must see that the patients are comfortably in bed; *and it is especially enjoined* that they offer gentle and patient assistance to the feeble and aged, and leave all with a kind 'good-night.'

"Night Attendants.

"Sect. 1. The night attendants will visit the office at eight o'clock in the evening to receive their instructions for the night, and go on duty at once. They will continue in charge of their respective sections of the house until after the ringing of the rising bell, at the times established, after which they will be relieved by the attendants.

They must be always awake, vigilant, and faithful, giving their whole attention to the condition of the house and the patients. They must make their respective rounds, not hastily, thus leaving a large part of the time to be spent at the office, but dividing it between the various apartments as directed. They must pass through the halls in the most quiet manner, being especially careful in opening and closing doors, and make the personal observations required with the most respectful delicacy, disturbing the patient as little as possible.

"They must be especially watchful of the sick; minister tenderly to their wants, carry out scrupulously all instructions in regard to them, and report to a physician any unfavourable change of condition.

"They must promptly attend to the call of patients, ascertain their wants, and satisfy them, if practicable.

"They must do all in their power to soothe and quiet any who may be wakeful or timid, and assure them of their safety.

"Sect. 2. They must be especially vigilant in the care of those inclined to suicide or self-injury, and neglect no effort to be assured of the safety of such, in accordance with the specific directions they receive in each case.

"Sect. 3. They must be always watchful in regard to fire; and, if it occurs, must at once, and in the most quiet manner, inform the officers and *employés*, without a general alarm, and proceed to extinguish it. They must frequently inspect the attics of their respective departments, and see that the iron doors are kept shut.

"The safety, the comfort, and the lives of large numbers are entrusted, in a great measure, to the night attendants, and a degree of vigilance and faithfulness, corresponding to the magnitude of the interests at stake, is expected of them in the execution of all instructions given them.

"Sect. 4. It is the imperative duty of the night attendants to report any irregularity or violation of the rules of the house which may come to their knowledge, to the superintendent, and not to make the same a subject of remark elsewhere.

"Sect. 5. During public exercises in the chapel on Sunday, and other occasions, it is made the duty of the night attendants to look to the condition of the halls in the absence of the attendants."

REPORT OF THE WILLARD ASYLUM FOR THE INSANE.

During the year 1878 the daily average of the patients has been 1,340, the number discharged as recovered being 6; improved, 39; not improved, 28; not insane, 1; died, 87. Dr. Chapin, the able medical superintendent, makes some valuable remarks on the cause of insanity in the State, and on other matters connected with lunacy.

REPORT OF LUNATIC ASYLUM. NO. I. FULTON, MISSOURI.

During the two years from November 1876 to November 1878, there were admitted into this asylum 337 in all, of which number 196 were males, and 141 females. Of those discharged 171 had recovered.

With regard to the moral treatment of insanity, Dr. L. R. H. Smith, the medical superintendent, makes the following valuable remarks:—

"In our moral treatment, it has been our uniform rule to

impress upon all the paramount importance of kindness in all our intercourse with the insane. Indeed, I have scarcely language to indicate my estimate of its value, for without the rigid enforcement of this regulation, it is simply impossible to attain any high degree of success in treatment, as the influence of all other instrumentalities would be, to a great extent, neutralised. But with proper 'individualised' treatment (which includes kindness), the unbalanced mind is prepared to receive the best impressions our varied means of occupation and amusement are designed to make. In other words, their curative influence would thus be intensified, and result in the highest success. To secure such treatment, how essential that our attendants, with fair intelligence and unblemished moral character, should possess kind and humane dispositions, and be conscientious in the discharge of their most responsible duties. I have always endeavoured to select this class of attendants, and then impress upon them, from time to time, the obligations their positions impose, and that the success of all other treatment depends largely upon the faithful performance of their duties. To impress upon them more deeply, if possible, the sacredness of their obligations, I also say to them, that we will expect you, at all times, to treat those committed to your charge with the same kindness, forbearance, tenderness and sympathy you would desire your own fathers, or mothers, or brothers, or sisters, if similarly affected, to receive if placed in the care of strangers. With this course, and the regular and systematic daily supervision exercised over our entire household, we believe that we have succeeded in causing the law of kindness to prevail in all the departments of this institution, to an extent that is unsurpassed in any other of like character."

REPORT OF THE WESTERN PENNSYLVANIA DIXMONT HOSPITAL, 1878.

During the year there were 782 patients under treatment. Of this number 183 have been discharged or died, 63 having recovered. Dr. Deed gives us some carefully drawn up and interesting statistical tables, the minutest detail being especially mentioned.

REPORT OF MASSACHUSETTS GENERAL HOSPITAL, 1878.

The number of inmates in this hospital on January 1, 1878, was 156. The whole number of patients treated during the year is 334 paying, 1,578 free, and 38 paying part of the time. Of this number 956 were discharged recovered. Dr. Jelly is the medical superintendent, and his successful efforts are ably seconded by several assistants.

REPORT OF THE BATLEY HOSPITAL FOR THE INSANE, 1879.

To Dr. John W. Sawyer and W. B. Duncan (Ky.), Superintendents, we are indebted for this interesting report:—

“We have no great changes to record this year. The noticeable facts are, that we have had a larger number of patients under treatment by 13, and a larger number remaining at the end of the year by 14 than ever before. It is also noticeable that the number of deaths was much larger than for the previous year, or than for any year in our history except 1853. We have no explanation of this, except that—

Leaves have their time to fall
And flowers to wither at the north wind's breath,
And stars to set: but all—
Thou hast all seasons for thine own, O Death!

“Perfect drainage, the utmost attention to cleanliness and order, an abundant flow of pure water, with good ventilation of rooms, and proper exercise in the open air by all patients able to take it, has saved us from malarial and epidemic disease of every form. Moreover the health of officers, attendants, and servants has been exceptionally good.

“Of course we look for greater mortality among our patients than among those sick with ordinary diseases. Many patients come to us who are already stricken with death. To our eye the fatal arrow is already fixed and quivering in their hearts. The disease which has touched the brain finds its seat in some vital bodily function; or the paralysis which has seized the body announces a fatally diseased brain, which no medical skill can reach. Some of these are advanced in age. At the best they are on the downhill of life. In the decay of nature, unfortunately, their mental balance is disturbed or destroyed. They do not realise it. They think all men crazy but themselves, and at no time show the nature of their malady so clearly as in their excited attempts to prove themselves sane. They resisted those restraints deemed necessary for the safety of themselves and their friends at home, and were brought to us with little hope of cure, but rather for watchful care and kindly ministry until the sands of life are fully run.

“In some of these cases—possibly of men whom we have long known and esteemed—it is painful to mark the constant friction between a diseased and decaying body and a disordered mind. Each preys upon the other, and, however unwittingly, hastens the certain dissolution.

“It is doubtless true that even in this class of cases the lives of many patients are prolonged and their comfort promoted by removal to the hospital. They could not be kept at

home with safety to themselves or the family, without some seclusion, and constant watch by experienced nurses, day and night; and this, where possible, would prove a cause of constant irritation. The sentiment that 'a man's house is his castle,' is not easily eradicated from the human mind. 'His castle'—his *fortified home*—and not his *prison*! We remember Edmund Burke's illustration of this sentiment: 'The rain may enter it, the winds of Heaven may enter it, but the king *cannot* enter it, the king *dare not* enter it!' How great an irritant then to a man who has any reason left, to find himself a captive in his own house, a prisoner in his own castle, a vassal where once a lord! This cause of irritation must, and from experience often does, increase the malady, which of all others most 'grows by what it feeds on.' We do not mean to say that this class of patients in a hospital lose this love of freedom, and accept proper restraints without resistance or complaint; but only that the rules of an institution like this, administered by wise and experienced men, arouse less antagonism and the restraints imposed are more readily accepted than they would be in their own houses. The value, therefore, of a hospital for the insane, as compared with any other great public charity, should not be judged by the percentage of its deathrate, or even of its recoveries for any specified period of time.

"While it is a curative institution to those patients who are within reach of the healing art, it is painfully true, whatever be the hopes of friends, that very many who come to us have reached a state of mental and physical decay, which none but the Divine hand by miraculous interpositions can arrest.

"In some of these cases the struggle for life goes on long after the weakened will has ceased to direct it, as from the momentum acquired or increased by delirium, while in others a mania apparently no more violent rapidly breaks down all power of resistance and hastens the end. It is therefore as difficult to account for the very small number of deaths last year as for the very large number this year.

"But even in those cases where death had set his seal, and sooner or later come to claim his own, the hospital has answered one of the great ends for which it was founded. It has been a safe retreat, a comfortable home for those whose

Hearts, *once* bold and brave,
Now, like muffled drums, are beating
Funeral marches to the grave.

"At the same time it has relieved the families from which they came, not alone from wearisome and thankless watching and toil, but also from anxious solicitude and care, which once

robbed the day of pleasure and the night of repose, and the community in which they lived from the dangers and alarms always existing when men whose passions have survived their reason are living without restraint."

Since the opening of the hospital, 823 patients have been discharged as recovered, 650 improved and 323 not improved. At the end of the year there remained 170, and during the year 26 were discharged recovered.

REPORT OF PROVINCIAL LUNATIC ASYLUM, ST. JOHN, N.B.

Admitted during the year 53 males, 44 females, 8 males and 8 females discharged recovered. The average daily number under treatment for the year was 151 males and 135 females.

Dr. J. T. Steeves says as follows on the subject of intemperance:—

"The popular idea at present is to arrest this state of ill health by education; and if it can be proved that the educated are less liable to disease than the uneducated, then the remedy should be applicable. There may be a difference of opinion as to the mode of accomplishing this part of the work of reformation, but I presume no one is bold enough to deny that education will be an essential factor in ameliorating the condition of that class of our fellows, viz. the unskilled workers, including all the poor. Fortunately for us in this part of the world, but few of the children of the poor are unable to read; this initiatory step is therefore taken toward what would seem to be the final great remedy—that of practical Christianity. There is one intermediate step which is of vital importance, that is, a right apprehension and observance of that day which God hallowed, viz. the Christian Sabbath. But the great enemy of these people, and obstacle in the way of progress in their redemption, is assuredly *strong drink*. If a plan could be devised that would prevent the use of *liquor* even on Saturday night, and especially on Sunday, freeing them from its influence on the latter day, an important step would be gained, rendering the task of applying hygienic influences comparatively easy. I must, however, leave this branch of the subject to abler pens and heads than mine, apologising, if I have already trenched on ground properly belonging to others.

"Before entering upon a new theme I should state that I am not ignorant of the opinion, which is probably a fact, that there is less insanity among uncivilised than among civilised people. But it is admitted that the former have their full share of idiots and fools, and that it is not civilisation which causes increased madness, but the abominations which are engrafted upon it."

REPORT OF THE ILLINOIS NORTHERN HOSPITAL FOR THE
INSANE AT ELGIN.

Admitted during the year 413, of which 215 were males and 198 females. Discharged 189 males and 162 females. The whole number under treatment during the year has been 453 males and 423 females; of this number 36 males and 43 females have been discharged recovered. We append some interesting remarks on the duties of attendants:—

“It will not be out of place here to direct attention to the delicate position in which attendants at insane asylums are placed. While such institutions are constructed with barred windows and other appliances, which are an admission of the fact that many of the patients are of desperate and unruly habits, yet the community at large entertain rather peculiar notions as to the application of force in the management of the insane. As far as practicable, physicians have substituted moral for physical force, and instructions are given the attendants to use the latter only as the very last resort, when the welfare or protection of the patient shall make it imperative, and then it must be employed with a firm but gentle hand. Emergencies will inevitably arise in which physical force must be used. Life itself may be in danger, and the desperate character of certain patients renders them amenable only to the lower form of physical control and restraint; which fact it is necessary for all to appreciate who would judge intelligently of these difficult cases. Of course considerable reliance has to be placed in the judgment and discretion of the attendants, and the utmost care ought to be employed in their selection. There is but a limited number of persons who care to embark in this occupation; which in many respects is unattractive, and a trial is often requisite to find out their suitability for the employment. In some instances the attendants are found unfit for the duties they have to discharge, and they are consequently dismissed, and their places filled with the best available material. Everything considered, it is somewhat surprising, making due allowance for the shortcomings of humanity, especially in view of the trying position in which the attendants are frequently placed, that their duties are performed with such general satisfaction. Two things should be borne in mind in the consideration of this subject: that our first duty is to protect the unfortunate inmates of asylums, and second to give to their attendants that charitable consideration which neither prejudice nor misrepresentation can disturb.”

Dr. Kilbourne has given us a very complete report, full of interesting data.

ART. IX.—MICROCEPHALISM.

BRAINS OF AN IMBECILE.

A GIRL, aged 18, of undeveloped intelligence and ineducable was sent as a herd by her parents into the woods, where she became pregnant by a shepherd. Sent to the Hospital de la Pitié, in Paris, she died twenty days after her accouchement.

The Brain of the deceased presented the following characteristic peculiarities:—The simplicity, the size, and the smoothness of the convolutions recalled those in the brain of the Hot-tentot Venus.

Certain of these anomalies are to be attributed to the arrestment of development; for example, the Fissure of Sylvius gaped so much that the Lobule of the Insula was exposed, such as is presented in a full-grown foetus. But there were other peculiarities which could not be so classed, such as the abnormal size of certain convolutions, and especially of the cerebellum, the small size of others, and the marked development of the perpendicular fissure, which are not presented in the foetus, but in the brain of the anthropoid apes.

The author styles these simply “indications of reversion,” and, recoiling from all hypothesis, confines himself to the following conclusions.

“1. That the weight of the brain, while it must be taken into account, must not be regarded as a measure of intelligence, as there must be likewise considered whatever data may be furnished by morphology and by microscopical investigation.

“2. The morphology of the convolutions is all important, as the congenital obtuseness of the intelligence corresponds almost invariably with the simplicity of these organs.

“3. Such simplicity appears to proceed from arrestment of development.

“4. Certain such morphologic conditions admit of no other interpretation; these constitute an abnormal arrangement both at the foetal and adult age of the human species, and are normal in the lower animals.

“In other terms, there may be structural deviations by mere arrestment, or by irregularity of development.”

M. Broca comments on these observations, that the amount of development is the only difference between the brain of man and that of the anthropoid apes. But according to M. Topinard

the difference of the quantity of the respective brains is enormous, so that the gap between man and the animals most closely resembling him in structure is very great. Thus the gorilla and man, otherwise more closely resembling each other, present in the former a mean cranium capacity of 500 centimètres cubes, and in the latter of 1,500 centimètres cubes in round numbers, or a difference of one to three.

MEXICAN MICROCEPHALES.

AZTECS.

On the presentation of two Mexican Microcephales who had been exhibited in Paris nineteen years ago, and who now, although somewhat developed, were still idiots, a discussion arose in the Anthropological Society as to whether the microcephalic condition depended on the premature closing of the sutures of the skull, or upon the arrestment of the development of the brain itself, when it was proposed that as individuals very closely resembling those under examination were to be found in asylums, steps should be taken to secure from the medical men of these institutions facts, photographs, &c., which might throw light on the subject under investigation—a project which, although not effectively carried out, might be resumed with valuable results. Full descriptions and representations of the Aztecs now alluded to are to be found in the *Bulletin Anthropologique*, 1875, which it may be interesting to compare with the observations published when these idiots made their first tour in Europe twenty years ago, and for which we are indebted to Darren, in America; Richard Owen and Conolly, in England; Saussure, Jules Guerin, and Baillarger, in France; Carus and Leubuscher, in Germany, &c. &c.

M. Hamy has arrived at the conclusion that such microcephales are the issue of a connection between the Indian and the Negro, in which the former element preponderates, and, without speculating more profoundly as to their origin, he detects in them a striking resemblance to the bas-reliefs sculptured on the ruins of Palenque (Mexico), which have been regarded as the figures of idiots and microcephales, formerly objects of worship; in the same way as imbeciles and lunatics were superstitiously looked upon in Europe.

[Another theory has been propounded, to the effect that the bas-reliefs seen in the colossal temples in South America represented the monarchs or rulers of a tribe bearing the name of Aztecs, dwarfed or degenerated by luxury; or it might be by artificial means, and then commemorated as objects worthy of honour and respect, if not of adoration.—ED.]

RUSSIAN MICROCEPHALES.

M. Mierzejewski, St. Petersburg, gives the account of a microcephale examined by him, who during his life of 50 years vegetated in a state of moral and physical apathy, never displaying more intelligence than an infant eighteen months old. The weight of the brain was only 369 grammes, standing in proportion to the body as one in 250, regarded by the narrator as the lowest weight as yet recorded by science. The shape of the brain, the disposition of the convolutions of the Fissure of Sylvius, and of the Frontal and Parietal Lobes, resembled that of a human fœtus of nine months or less.

The microscope showed that the grey substance preserved its nervous elements and interstitial structure in their normal state and relations.

M. M. remarks that the central lobes were obviously the smallest, and that in them consequently the arrestment of development was most conspicuous. These parts are known to contain the largest cellules of the circonvolutions which have been considered as essentially motor centres. At this point it might be demanded whether to the non-development of those lobes and their contained cellules might be attributed that apathy by which the idiot was characterised. In connection with the latter observation, M. M. adduces the case of another microcephale in whom the central lobes were prodigiously developed, and who was remarkable for his restlessness and mobility.

WEIGHT OF MICROCEPHIC BRAINS.

In a microcephale, who died æt. two years and three months, examined by MM. Guéniot and Broca, whose complete brain with membranes weighed only 406 grammes, but in which atrophy was most marked in the right cerebral hemisphere, which weighed 52 grammes less than the left; the parietal region of the cranium presented a depression corresponding to the most atrophical part of the brain, consequently the cerebral atrophy had been the primary phenomenon; furnishing an additional fact in opposition to the theory of Vogt and Virchow that the premature closures of the sutures is the cause of the non-development of the brain.

M. Broca has likewise described an infant, aged $3\frac{1}{2}$ months, born with an imperforate anus, the rectum opening obliquely into the vagina. The infant being in great danger, an operation was performed without success. The cranium of this child was excessively small, the brain weighed only 104 grammes. This is the smallest weight ever observed in a child born alive,

and is five times less than what generally exists in a child four months old.

This minute brain did not occupy the whole of the cavity of the skull, the intervening space being filled up with a compensatory cerebro-spinal fluid. The anomalies in the brain-substance were numerous, but they did not correspond to any stage of the ordinary evolution in man or animals.

ARTIFICIAL DEFORMATIONS OF SKULL.

Microcephalism is not the only cranian anomaly to which the attention of scientific men has been directed. Discussion has often arisen as to the artificial as well as the pathological deformities of the skull. The former are especially prevalent in savage and uncurbed populations, especially in North and South America, and in the meridional portions of these regions, such as Peru. Moridière has recently noted them among the Anamites.

Not merely in antiquity and in remote countries, but even at home, a somewhat similar practice has been described by MM. Foville, senr., Delaye, and Lunier, when pointing out the process by which nurses in Normandy, Toulouse, and the Deux-Sèvres, surround and compress the heads of newly born children with bandages.

[In a work devoted to this subject M. Foville gives illustrations of the extent to which those appliances influence the shape and contour of the whole head or certain of its regions. We have been assured that in the northern parts of our own country similar artificial interference with the growth of the head was resorted to at no distant date, although the deformity was neither so great nor so grotesque as are the cases represented by our French authority.—ED.]

M. Broca has recalled these observations when examining a cranium sent to him from the Hôtel Dieu at Rouen, at the same time stating that alienists had denounced the practice of interfering with the development of the head not merely on the ground of the hideous malformation at once produced, but of the intellectual disturbance and disease which followed. He likewise referred to a certain number of the crania of very young children in which the bones appeared worm-eaten or partially unossified at the very points corresponding to the position of the bandages, but added that the exposure and remonstrances by medical men had contributed to diminish such injurious practices. M. Parrot has observed that cranial deformity may be attributed to two causes: first, from the custom of placing infants always in the same position and generally on the right

side, which determines the flattening and depression of the frontal and parietal bones of the same side; and, secondly, from a partial and unilateral atrophy which involves deviations from the normal force of the heart in badly nourished children.

SCAPHOCEPHALIA AND PLAGIOCEPHALIA.

These terms represent vicious deformations which destroy the symmetry of the cranial cavity. By scaphocephalia is to be understood a change from the natural shape of the skull in which the parietal bones are united at the sagittal suture, so that the lateral enlargement of the brain is prevented, while that in the direction of the occipital and frontal bones is exaggerated. The parietal bones themselves are considerably increased in length. This distortion has been compared to a boat, and named from the supposed resemblance. So rare is this anomaly, that M. Hamy has affirmed that not above forty examples are known to scientific men. Numerous theories have been suggested in explanation of this anomaly: 1st. It has been advanced that the points of ossification usually existing in the posterior lateral part of the parietal bones are absent, but are replaced by a point situate in the median line, the radiations from which convert the two parietal bones into a single solid bone.

2ndly. Certain speculators refer this state to an antecedent malformation of the encephalon, which consecutively influences the bones, so that the skull moulds and accommodates itself to its contents.

3rdly. Virchow and Huxley contend that this deformity is the result of the obliteration of the sagittal suture, in consequence of an inflammatory action taking place during intra-uterine life, which unifies and consolidates the two bones into one, prevents their lateral enlargement, and necessitates an elongation before and behind.

4thly. M. Morselli, adopting this solution in part, holds that its primary cause is to be found in an original vice of the development of the parietal bones, and by the misplacement of the ordinary lateral points of ossification near to the median line, so that the two bones are brought into contact too rapidly, or at too early a period.

The theory of Virchow is that which seems to be most generally adopted.

M. Hamy has formulated and reconciled these different opinions thus: that scaphocephalia is due to a premature and intra-uterine synostosis of the parietal bones having an inflammatory origin, and that the nervous centres do not appear to exercise an influence upon this pathological change.

PLAGIOCEPHALIA

Consists in an oblique or oval deformity of the cranium, in which the greatest diameter, instead of being longitudinal and antero-posterior, is oblique and diagonal; and further, that one of the oblique diameters is greater than the other—in other terms, there is a projection of the frontal bone upon one side, and of the occipital bone upon the other.

According to MM. Topinard and Broca, the anomaly may be traced either to mechanical, pathological, or posthumous causes. In the first place, under the mechanical may be classed the artificial modifications detected in the skulls from meridional America—decrepitude due to the injudicious position given to infants by nurses, especially in ill nourished and atrophic subjects.

[It is marvellous that the effects of the rash employment of forceps in parturition has not been added to this list.—ED.]

In the second place, among the pathological may be classed the premature obliteration of one-half of the coronal or lambdoidal sutures, which may be associated with other obliterations; chronic torticollis, which, whether in the child or the adult, seems to interfere with the nutrition of the face and cerebral tissues; rachitic malformations; the absence of the third convolution of the left cerebral hemisphere in the deaf and dumb, of which M. Broca has seen two examples, or, rather, supposed examples, is conjectured as sufficient to produce this cranial anomaly.

Thirdly. Posthumous alteration in the form of the skull must be traced to the humidity or weight of the soil in which a corpse has been interred. This change cannot be confounded with the effects of rachitis, provided the inferior maxillary bone remains, which is invariably adapted to the glenoid cavity when the deformity has preceded inhumation.

M. Topinard has announced the frequency of plagiocephalia in a series of 525 skulls in the collection of M. Esquirol. The want of symmetry in the cerebral and cerebellar cavities is more frequent and more marked in these than in any series of ordinary skulls. As the skulls under observation were generally those of insane persons, it may be concluded that the modifications which they present are more or less connected with the progress of mental disease.*

* Translated and abridged from the *Annales Médico-Psychologiques*, July 1879, and the *Bulletins of the Society Anthropologic*, 1874, 1875, and 1876.

ART. X.—PRIVATE ASYLUMS.

THERE are existing in the Metropolitan district 39 Private Asylums licensed for the reception of lunatics, the Provincial number being 60.

During the year most unjustifiable and unwarrantable attacks have been made against these institutions and their proprietors by not only the lay papers, but also by the *British Medical Journal*. It must be a subject for congratulation to all those connected directly or indirectly with private asylums to read the remarks of the Commissioners in Lunacy in their last Report. Much correspondence has taken place on the question. The *Medical Press and Circular*, when speaking on the subject says:—

“The unjustifiable and indiscriminate attacks which a large portion of the daily press has recently levelled against private lunatic asylums makes it incumbent on us to expose the senseless fallacies of those who have joined in the blatant cry against the proprietors of these establishments, amongst whom can be numbered some of the greatest philanthropists of the age; and the wholesale slanderers of a humane and honourable class should be reminded, that it is to these we are chiefly indebted for the great improvements which have taken place of late years in the treatment of the insane.

“Without the slightest wish to detract from the great merits of our public pauper asylums, we think it fair that the special advantages of small private asylums should be duly recognised, and it will relieve the minds of those who have relatives in them to learn that they are not the ‘hells’ that some poor deluded individuals would lead us to suppose.

“It must be evident to every candid observer that in a public asylum where there is a proportion of three or four medical men to several hundred patients, it is impossible to give that particular attention to each case which it would receive where one person had the superintendence of a limited number of patients only. The particular symptoms of some subtle form of mental aberration must often be overlooked in so vast a crowd. In a private asylum the duties of the superintendent are most anxious and arduous. His whole existence is mixed up with that of the patients; he has to share their meals and their amusements. He is therefore necessarily subjected, not only to frequent petty

annoyances, but it sometimes even happens that his life is placed in jeopardy. These molestations can be borne, but it must certainly be trying to his patience to have to endure the unprovoked slander of ignorant scribblers at a time when he believes himself usefully and benevolently employed in relieving the sufferings of his fellow creatures.

“The most scrutinising inquiry by the Dillwyn Committee of the House of Commons has satisfactorily shown that no instance of *mala fides* could be proved against any proprietor of a private lunatic asylum.

“One of our contemporaries has likened private asylums in part to hotels; we were not before aware that a stranger could enter an institution of this sort and order a bed and bitter beer.

“Private asylums at the present day differ very materially from what they were some years ago before the legislature took up the question; and in spite of what we read of in the papers, we state emphatically that it is impossible, under the existing state of our law, to confine or detain a person unjustly in a private asylum.

“The unhappy sufferers are treated with the greatest kindness and consideration, and it is the aim and effort of the proprietor and superintendent *not* to detain his patient unjustly, but to do all in his power to restore reason, and ‘minister to a mind diseased.’”

The Commissioners make the following remarks on Private Asylums:—

“In our Twenty-fifth Report (for 1871) we took occasion to describe each licensed house then open in the metropolitan district; and in the Twenty-sixth Report we gave particulars of those licensed by justices, prefaced by a general sketch of the character and condition of these proprietary establishments. We there stated that they were very different from what such houses had been within the memory of several members of our board, and that their gradual improvement had been very great.

“We can now report that, since 1872, a few only of the houses then referred to have been closed, and those few, with a single exception, in consequence of the death or retirement of the proprietors. Within certain limits, beyond which activity would defeat its object, our criticism of the details of management of licensed houses becomes year by year more and more searching; and although the amount of order, good management, comfort, and attention to the wants of the patients varies much, and is not everywhere thoroughly satisfactory, yet the general improvement continues, and consequently the standard aimed at becomes higher and higher.

“A good deal of unfavourable comment has lately been made upon the licensed houses and their proprietors, both before the Select Committee of the House of Commons (whose report we shall have occasion presently to notice) and elsewhere. Some witnesses called by the Committee went so far as to ‘urge the immediate abolition of all such houses, on the ground of the temptation to keep profitable patients longer than necessary.’

“A system which places the insane in charge of persons who derive profit from their detention, is no doubt objectionable in theory ; and in practice (like many other things) may be open to abuse. But so far as regards the licensed houses in England and Wales, which alone come under our observation, we are convinced that, under the strict supervision and the safeguards which the Lunacy Acts provide, no such abuses are possible as have been in some quarters seriously alleged, such as the ‘incarceration’ of sane persons, or the prolonged detention for corrupt motives of insane persons who have entirely recovered their reason.

“Nor are the proprietors of licensed houses open to the sweeping charges of dishonesty and self-seeking which have been brought against them as a body. It should not be forgotten that these persons to some extent are competing with each other and with the hospitals in a business which, to be remunerative, must be conducted on principles of ordinary prudence and common honesty.

“Moreover, in the vast majority of cases (admitting that instances to the contrary might possibly be found), the speedy cure of an insane patient is, on pecuniary, if on no higher grounds, an object of the greatest importance to the persons with whom it rests to decide where to place him under treatment, and every cure that can be shown becomes in fact the best advertisement of the establishment in which the cure is effected.

“Our own opinion is that the licensed houses supply at present a social want ; and that their abolition, without the substitution of other and better establishments, would assuredly multiply cases of illegal charge and consequent neglect and ill-treatment of lunatics, and would also lead to the clandestine removal of many such persons to foreign parts.

“Were asylums for the reception of private patients erected at the public cost, we doubt whether such institutions would be more acceptable to the friends of wealthy patients than the hospitals now registered under the Lunacy Acts, which do not receive many lunatics of large fortune. What these substitutes should be is a matter of more difficulty. Certainly the ex-

perience of past years does not show any disposition on the part of the public to increase the number of institutions such as the present hospitals, founded on the principle of 'applying the excess of payments of some patients for or towards the support, provision, or benefit of other patients.'* (8 & 9 Vict. c. 100, s. 114.)

"These views, it will be seen, are much in accordance with the conclusions of the Select Committee appearing in page vi. of their report. The entire passage is as follows:—

"The Committee found the greatest diversity of opinion with regard to private licensed houses. Some witnesses urged the immediate abolition of all such houses, on the ground of the temptation to keep profitable patients longer than necessary. Others as confidently stated that such houses supplied an acknowledged want, that there was a greater percentage of cures among patients under private care than among those in public asylums, and that it was the interest of the proprietors of private asylums to maintain the character of their establishments; while in public asylums, though the temptation to detain unduly for the sake of profit could hardly be said to exist, yet that paid officials might lose personal interest in the good and careful management of these institutions. Other witnesses, again, took a view between these two extremes, and considered that no alteration of the law in this respect was necessary, but that the matter had better be left to the spontaneous action of the public; that the time might arrive when there would be sufficient accommodation in public institutions for all classes, such as exist in Scotland, in Cornwall, and at Cheadle in Cheshire.† When that time arrived it was possible that there would be no demand for licensed houses for the upper and middle classes, nor would lunatics be kept any longer in the wards of work-houses, which, it was represented, are often, especially in Ireland, most unfit for the purpose. In this opinion the Committee concur, and they would suggest that legislative facilities should be afforded, by enlargement of the powers of magistrates, or otherwise, for the extension of this system.'

"Before leaving this head of our report, we will enter into a few particulars which may throw further light on the present position of the licensed houses. The number of patients in

* The only two Hospitals which were not in existence in 1859, are Barnwood House, which took its rise from the separation of the "charity" element from the General Asylum, at Gloucester, and the Royal Albert Asylum for Idiots.

† The Committee appear to refer to:—1. The "Chartered Asylums" of Scotland; 2. The detached building at the Cornwall County Asylum in connection with a charity, where private patients are received at low rates; and, 3. The "Royal Manchester Lunatic Hospital" at Cheadle, registered under 8 & 9 Vict. c. 100.

licensed houses (if we exclude the paupers, the inmates of idiot institutions, and the insane soldiers received in Grove Hall under a contract with the War Office) are 1,432 in the metropolitan district and 1,455 in the provinces; altogether 2,887 persons. The houses in and about London are 37, but these include four where idiots only are received. Those in the country are 60; they also include four receiving idiots only. Of the 33 metropolitan houses (excluding those which receive idiot children only) 13 have 30 patients and upwards. In the provinces, with 12 exceptions, the number of private patients does not, in any one house, exceed 30. Many licensees in town and country have fewer than 20 cases under their charge, and some are limited to the reception of two or three individuals being brothers or sisters.

"The charges for care and treatment in licensed houses of course vary much, according to the extent of the accommodation and style of living. We find that the present average payment for each patient in the 89 licensed houses which receive lunatic private patients, as distinguished from idiots, is approximately as follows:—

"In 32 of the houses, receiving about 1,300 patients, the average payment is under £100 per annum.

"In 22, receiving about 750, the average payment is from £100 to £150 per annum.

"Thirty shillings and two guineas weekly, are ordinary charges in houses of this class, but a large proportion of patients are received there at rates not exceeding one guinea, while comparatively few pay more than three guineas a week. To obtain admission for a private patient into any licensed house for a payment below thirty shillings a week is, however, not easy, and it is almost impossible if the patient be very infirm, noisy, destructive, or of dirty habits.

"In the remaining 35 houses the charges are higher.

"In 18 of these, the average payments range from £150 to £200.

"In 13 from £200 to £280.

"In 4, from £280 to £330, and in one house they reach £470, including cost of carriages, and other expensive luxuries.

"Against the highest sums demanded in the first-class houses we should mention this set-off, viz., that in most of them there are cases of very long standing whose cost of maintenance actually exceeds the small payments which can be obtained for their support from the surviving members of their families.

"Further particulars as to the extent of the licence of each house, and as to the average number of patients resident, during 1878, are given, as heretofore, in the Appendix (B).

“In some of these establishments are occasionally living, by our special permission, relatives or connection of patients. We think that the association of such persons is often most beneficial. We also think that an additional guarantee is afforded for the proper care and treatment of all the insane inmates of a licensed house by the presence among them, and sharing their everyday life and general treatment, of one or more visitors of sound mind interested in checking maladministration, acting as so many watchful eyes over the attendants, and not restrained from complaint to us or to the proprietors by any fear of personal consequences. We therefore do all in our power to encourage the residence of such friends, and in one of the larger ‘private asylums’ in London several are always staying.

“In the house just mentioned, and in many others, are also voluntary boarders residing by similar permission, being usually persons liable to recurrent insanity who feel the advantage of a regulated life, with constant access to medical advice. At our periodical visits we satisfy ourselves that they have not relapsed into certifiable unsoundness of mind, and that their stay is entirely their own wish. The presence of these individuals in licensed houses is another valuable check upon improper proceedings there, and affords some proof that the general management of the establishment (of which, while insane, the boarder has usually had experience) is not objectionable to him.”

ART. XI.—THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

By J. M. WINN, M.D., M.R.C.P. &c.

THE Annual Meeting of this Society, which has been recently held at Sheffield, was chiefly conspicuous for the revival of the crude materialistic hypotheses of the Tyndall and Darwin school. The ex-Presidents, Edwards and Spottiswoode, in past years, confined themselves in their addresses exclusively to the discussion of scientific facts; this year, however, the President and other members have gratified the taste of a large portion of the public by parading extravagant theories, as improbable as they are sensational. Physiological psychology and evolution have again run rampant, and the prodigies of Bathybius and brain-cells have again been held up to astonish and bewilder the ignorant and unwary.

We cannot understand the unqualified encomiums which have been lavished on Doctor Allman's address by the public press. The President advanced nothing new about protoplasm, or the effects of anæsthetics on plants; and it was premature and unwarrantable to say that "when a thought passes through the mind it is associated, as we have now abundant reason for believing, with some change in the protoplasm of the cerebral cells." The fact is, we are not yet in possession of data to substantiate such an assertion; and it is of the utmost importance that a hasty opinion should not be formed on a question so closely associated with the independence of the human mind. This bold assertion which has been accepted by many as an established truth, is the keynote of those who style themselves physiological psychologists, and whose endeavour it is to materialise mental phenomena, and identify mind with matter. In our waking moments it has never been demonstrated that a thought effects any change in the protoplasm or ganglionic cells of the brain; how utterly inconceivable it is then, that a subtle intangible thought such as flits across the mind in a dream should produce the slightest molecular alteration, especially at the very time when the nervous system is recuperating itself by rest, and is supposed to be least susceptible to impressions. After making the above bold assertion, Dr. Allman is inconsistent in allowing that there is no analogy between thought and the phenomena of matter, and that the "chasm between unconscious life and

thought is deep and impassable." In the article on "Mind and Living Particles" in the last number of the *Journal of Psychological Medicine* the same idea was expressed in the following words: "Any attempt to bridge over the mysterious region between mind and matter is as hopeless as the endeavour to span the space between our earth and the most distant fixed star."

Having gratuitously assumed that a molecular cerebral movement is indissolubly linked with a mental conception, the materialistic psychologist, without hesitation, infers that thought is a function of the brain. The mind of man which perceives, thinks, and wills, is, next to the Divine Intelligence, the grandest and most mysterious *fact* in the universe, and as such we must humbly accept it.

It is satisfactory to find that Dr. Hughlings-Jackson, who was formerly a firm believer in physiological psychology, has at length candidly acknowledged that he had been in error. We quote the following observations from an article of his in the *Medical Press* for Sept. 3, 1879: "In a scientific investigation of nervous diseases, it is essential to *keep distinct psychology* and the anatomy and *physiology* of the nervous system. . . . I have been misled by not having seen the distinctness of physical (nervous) states and psychical states, in my earlier studies, and thus *I feel bold* to point out the evil results of the *confusion of the two things*." Dr. Hughlings-Jackson must not think that he has acted with extraordinary boldness in making these remarks. He has not been the first to mount the breach. The fallacies of physiological psychology were fully pointed out in an article on "Materialistic Physiology," in Vol. iii., New Series, of the *Journal of Psychological Medicine*.

Dr. Allman is not strictly logical in defining life as a property of protoplasm (we prefer Dr. Lionel Beale's more explicit term bioplasm), and we are no more justified in the present state of our knowledge in saying that life is a property of bioplasm than we should be in saying that mind is a property of the brain, because in both cases we find them associated; and the close resemblance between the bioplasm of plants and that of animals, does not necessarily imply that there is no fundamental difference which the microscope has not yet revealed to us. Would any biologists be so presumptuous as to say that there is nothing in heaven or earth beyond what is discernible by our senses? All we know is that a principle or power called life has been superadded to matter, and the deeply interesting researches of the microscopists have demonstrated that this power can be traced carrying on its operations in the minutest portions of both animals and plants; and although Dr. Allman upholds

that "there is no dualism in life—that the life of the animal and the life of the plant are, like their *protoplasm*, in all essential points *identical*!—and advocates a strong family likeness between a man and the *Drosera*, merely because it absorbs nourishment from animal matter, yet he is forced to confess that there may be a *fundamental* molecular difference between animal and vegetable protoplasm. He observes: "To suppose, however, that all protoplasm is identical where no difference cognisable by any means at our disposal can be detected, would be an error. Of two particles of protoplasm, between which we may defy all the power of the microscope, all the resources of the laboratory, to detect a difference, one can develop only to a jelly-fish the other only to a man; and one conclusion alone is here possible—that deep within them there must be a fundamental difference which thus determines their inevitable destiny, but of which we know nothing and can assert nothing beyond the statement that it must depend on their molecular constitution.'

Dr. Allman speaks of the myth *Bathybius* as if it were a reality, and of the law of evolution as if it were an established general truth, evidently not being aware that some of its warmest advocates are at length compelled to admit that it is not a demonstrated fact. One of them has recently observed, "Perhaps it would be unwise to regard either pure materialism or the theory of evolution as amongst the best established facts in science"; and it would be more consistent with common sense and the rules of inductive philosophy for evolutionists to leave their theory in abeyance, until they have answered the numerous objections which have been so frequently brought forward in the pages of the *Journal of Psychological Medicine*.

Dr. Allman, carried away by his unbounded faith in an unverified hypothesis, gives the reins to his imagination, and looks forward to a period when the human intellect will be developed to such an extent by the agency of the god Evolution, assisted we presume by the angel *Bathybius*, that it will be able to comprehend 'the great mystery of thought.' This day we fear is very far distant. If we may judge from the reasoning powers displayed by the scientific men of the present time, it may be safely averred, that the pure intellect of the philosophers of Greece would bear comparison with them, and that the human mind is in much the same state as it was more than two thousand years ago.

In the biological sections, Sir John Lubbock, who, following in the footsteps of Dr. Watts, holds up to our admiration the busy bee and the industrious ant, mentions some new and interesting facts regarding the habits of the last-named insect.

He thinks so highly of its reasoning faculties that he believes, that if its span of life were not so short, and it had more time to cultivate its intellectual powers, it would rise in the scale of civilisation. He considers that animals possess a mind differing only in degree from that of man. St. George Mivart, Dr. Allman, and the majority of those who were present, were of an opposite opinion, and held that the difference was in kind and not in degree. It is a saying as old as the hills that the exclusive pursuit of one study is apt to warp the judgment, and whilst looking up to Sir John Lubbock and Huxley as two of the most distinguished naturalists of the day, it is impossible to help noticing the egregious mistakes they fall into when discussing questions connected with mental philosophy.

REVIEWS.

Problems of Life and Mind: the Study of Psychology, its Object, Scope and Method. Third Series. By GEORGE HENRY LEWES. London: Trübner & Co. 1879.

THE late Mr. G. H. Lewes, who was well known as a dilettante physiologist and psychologist, published before his death a work entitled *The Physical Basis of Life*, which added nothing to our knowledge of physiology, and was only remarkable for pretentiousness and pedantry. His posthumous treatise, *Problems of Life and Mind*, is a still greater failure. He belongs to the same school of pseudo-philosophy as Comte, Bain, Werndt, Spencer, Huxley, &c. &c., though differing from them on some points; but in spite of his metaphysical verbiage, his leaning towards materialism is perfectly apparent. The anxious student whose mind is wavering between belief in necessity or freewill, and who takes up these *Problems* in the hope of finding the solution of his doubts, is likely to rise from the perusal of them with his brain completely addled. We can picture to ourselves the misery and distraction he would have to endure whilst attempting to get at the meaning of the following passage with reference to the general question of objective and subjective laws: "Biology presents it in a peculiar light; for here for the first time the twofold aspect of phenomena becomes conspicuous, our interest in the subjective side, that of feeling, being as great as our interest in the objective side, that of force. It takes its undeniable place among the objective sciences, for although vital phenomena are special, they are specialisations of the general properties of matter, and are expressible in terms of force. It also takes its place among the subjective sciences, since its phenomena include those of mind. In its evolution it passes from vegetality to animality, and through animality to humanity. With animality a new factor, sensibility, becomes conspicuous. With humanity another factor emerges—sociality."

G. H. Lewes, like all the physiological psychologists, has jumbled mental faculties and bodily functions together, in a manner not warranted by introspection or scientific research.

Psychological and Ethical Definitions on a Physiological Basis. By CHARLES BRAY. London: Trübner & Co.

This pamphlet is dedicated to the President and Members of the Psychological Society of Great Britain. We cannot suppose that a treatise like this, with an unmistakably strong materialistic tendency, can be acceptable to a society which believes that the spirit of man is so entirely independent of physiological conditions, that it can pass through stone walls with as much facility as a harlequin through a trap-door. The writer is a profound admirer of G. H. Lewes, whom he takes as his model, and his judgment is constantly warped by the speculations of that physiological psychologist. Under the influence of his teaching, and of the school to which he belongs, his conclusions are based on a wrong premiss, and it would be a waste of time to point out the numerous mistakes into which false logic has led him; for, as Goethe homorously said—

If the premises are hollow
The conclusions will not follow.

PSYCHOLOGICAL RETROSPECT.

THE *Medical Press and Circular* has devoted a considerable portion of its space to a "Lunacy Department," such a proceeding ought to receive the encouragement and thanks of those interested in the subject. We extract the following from this department :—

MR. DILLWYN'S LUNACY BILL.

We have been looking forward for some information in reference to what Mr. Dillwyn proposes to introduce into his "Lunacy Bill." We are not surprised that this Member should have taken the initiative in the matter, for he is alone responsible for the Lunacy Committee held last year, and for the mode in which it was conducted, and for the evidence which was deemed as admissible. The Member for Swansea has at various times during his parliamentary career occupied the attention of the House by asking questions relative to lunacy matters which from time to time have cropped up, and one of the last that we remember was in reference to the confinement of Miss Wood, one of the Shaker Community, who was placed under certificate in a private asylum in the country. The question asked in the House was indeed an extraordinary one, and proved that the Honourable Member was ignorant of the very elements of the Lunacy Laws. He asked by what clause in the Lunacy Act the incarceration of a person in an asylum could be allowed, who was not dangerous to herself or others? And as it was not shown that Miss Wood was so, whether she was not confined illegally? The House evidently could not answer the question, but next day a letter appeared from Dr. L. Forbes Winslow in the *Times*, drawing the Honourable Member's attention to the fact that it was not necessary for a person to be either dangerous to herself or others to be placed in an asylum, and there was no clause which could be so construed. The various questions asked by the Lunacy Committee proved that

most of the members were lamentably ignorant of the subject they had under their consideration. When we find the leading members of the specialty asked whether it is not possible to place a sane person in an asylum, and whilst there drug him with certain medicines until he becomes insane, and this question asked over and over again, we shudder to think that men of high calibre who composed this Committee should have tolerated such preposterous nonsense. Why did not the members of the Lunacy Committee visit all the private asylums near London, or some of them, instead of listening to the "hair-brained chatter of irresponsibility," and believing the insinuations made by discharged lunatics? In such a question, affecting as it does the management of asylums and the care and treatment of those mentally afflicted, we state that the proceeding of the Committee in general was badly regulated and utterly failed in its *modus operandi* to arrive at a right or just conclusion on the subject.

The Lunacy Amendment Bill of Mr. Dillwyn, now before the House of Commons, is of itself peculiar. It contains in all seventeen sections, and with the exception of one of these, it is worthless as an addition to our present Lunacy Law. The result of a long Parliamentary sitting of the Lunacy Committee has given rise to this Bill, but which does not, however, reflect much credit on the framers of its various clauses. It commences by a section in which the justices are empowered to purchase private asylums; but this is not compulsory, and the proprietors of the private asylums can suit their own convenience in this matter. If a private asylum is purchased, it becomes immediately converted into a public one, and is to be governed as such according as the existing Lunacy Law directs. Private asylums are to be under the jurisdiction of the justices and not of the Commissioners in Lunacy. Before a patient can be received into a private asylum he must be certified by two medical men, and an order for his admission must be signed by a justice of the peace, who, however, is not obliged to personally examine the alleged lunatic. In a case of sudden and violent attack of insanity, a person can be received into an asylum upon one certificate called an "emergency certificate," without any order being obtained previous to his reception. In such a case, however, a second medical certificate and a justice's order must be given within forty-eight hours from the time of the admission. There is one clause which refers to the admission of voluntary patients into asylums which is likely to do good service; a provision is here made by which lunacy certificates need not be signed except when absolutely necessary. One of the chief objections at the pre-

sent day to placing patients in asylums is a general antipathy to lunacy certificates, and the fear of being "branded" as a person of unsound mind to the detriment of future generations should the patient recover his reason sufficiently well to be liberated from restraint and supervision. By this clause it appears that it will not be illegal for the proprietor to receive into his establishment patients who may be stated to be on the borderland of insanity. Notice of this must be given to the Commissioners within three days from the reception. There is one extraordinary section enabling anyone to apply for permission to send two medical men to examine a person confined in a private asylum. If the Commissioners think proper to grant this request, the medical men visit the patient on two separate occasions, seven days intervening between the visits, and if they consider the case to be a proper one for discharge, he is set at liberty. The person who signed the order has notice of this, but no provision is made for him to take any steps to protest against such interference. This clause is most unsatisfactory in many respects, and is likely to be followed by endless complications. Attendants can be licensed to take the legal care of lunatics in private houses. This is most objectionable; it reminds us of the treatment of lunatics in the olden time, when attendants were entrusted with the responsibility of taking care of the insane, and when they knew that they were free from supervision they would lock the hapless lunatic in his room and repair to the nearest pot-house. Human nature is the same now as it was in those days to which we refer.

The proposed Act may be summed up as inadequate and useless for the purpose for which it was intended, and as there is no possible chance of such an Act passing, it is to be regretted that the work done by the Lunacy Committee has been in vain.

NUNN v. HEMMINGS.

There have been few cases within our remembrance which have been allowed to occupy the time of our law courts in such a useless manner as the one recently concluded.

Mr. Nunn, the unfortunate plaintiff, has been the inmate of no less than three asylums. He was placed in 1873 under the care of Dr. Forbes Winslow, in consequence of his having made two distinct attempts on his life; the first, by jumping out of a first-floor window, and the second, by swallowing his shirt studs. In addition to these he had made attempts on the lives of his children, and threatened that of his wife. He escaped from Winslow's asylum—in which he was treated as a drawing-room

patient, having a certain amount of liberty and parole—to Munster House, Fulham, under the care of Dr. Blandford and Mr. Hemmings, in which asylum he alleges that he was placed in a padded room as a punishment for an attempted escape, and was subjected to cruel treatment by being “ducked” twelve times in a bath. This is the charge, but beyond originating in his own imagination it is not substantiated by a single witness. The attendants who were at the asylum at the time were all summoned at the trial, and testified, one and all, that the whole was a pure fabrication of the unfortunate plaintiff.

The Lord Chief Baron endeavoured to close the case immediately after the examination of Mr. Hemmings; Sergeant Parry, the leading counsel for the plaintiff, would not consent to such a course, but for what reason we are at a loss to comprehend. The following medical men testified to Mr. Nunn’s state of mind at various periods:—Dr. Andrew Clarke, Dr. Boyd, Dr. Blandford, Dr. Stephens, Mr. Hemmings, Dr. Forbes Winslow, and Dr. Puller. It is, however, rather surprising to us that the latter gentleman, who had come expressly to give his testimony in the case, should have entirely forgotten that he had signed two certificates for Mr. Nunn’s incarceration—one for Dr. Winslow’s asylum, the other for Munster House.

Every medical man who signs a lunacy certificate should keep a copy of what he has signed for reference. In addition to the evidence of the medical men and attendants was that of Mrs. Nunn, who proved that she had taken the utmost care of her husband during the commencement of his abnormal mental state when at home, and was reluctant to place him under restraint, until it was found absolutely necessary to do so for the protection of herself and family and for his own good and safety.

The chief delusions under which this gentleman appears to have laboured, were that he was ruined, too wicked to live, and that he was starved. All these were proved in evidence to be delusions. From beginning to end the case was regarded as a sensational one. A crowded court who were never loath to publicly express their opinion, though they received a stern rebuke from the learned judge: an audience of women anxious to see asylums and their proprietors denounced and swept from the face of the earth, doubtless from personal motives and eager for revenge—in fact, the so-called “lunacy reformers” of England. The Chief Baron addressed the court as follows on this subject:—

“Looking at the assemblage of Englishmen, and I suppose I must call them, Englishwomen, who crowd this court, and who indulge in an abuse of the privilege of attending a public trial by giving vent to expressions of applause or condemnation,

I would have cleared the court before this, however difficult it might have been, but that I might have excluded many who take a fair, just, and natural interest in the case, and who have conducted themselves with perfect propriety."

A case like this calls for small comment from us. Such allegations as those made by the plaintiff, substantiated by no witness, may be pronounced delusions. The learned judge evidently held this opinion, also the jury, and there could have been no sane person in court who could have arrived at any other conclusion. It is, however, a monstrous shame that a professional brother should be liable to be dragged into a court of justice, put to great personal expense, as well as mental anxiety, on the insane assertions of an escaped lunatic.

On the merits of the case the Lord Chief Baron says as follows in his summing up:—

"Is it true? The defendant says it is a delusion absolutely, and there is a great body of evidence showing that the plaintiff has had delusions of a disordered brain. In his story the plaintiff is directly contradicted by *every living man* who could have witnessed the scene if it occurred. While in support of his claim there is *not one single witness* who has deposed to *one* fact, nor any confirmatory evidence."

After this statement of the learned judge, Mr. Hemmings would be justified in informing the proper authorities that this unfortunate gentleman is still at large. On the other hand, the learned judge let fall remarks to the effect that the statement of the plaintiff could not be substantiated by one single living witness, who could have been brought forward; and if for one moment we can regard the plaintiff as a sane man, the only course open to Mr. Hemmings would be to indict him for corrupt and deliberate perjury. Mr. Hemmings leaves the court with the sincere sympathy of his professional brethren, and we say emphatically without a stain on his character.

PROFESSIONAL RESPONSIBILITY.

A case involving an important medical issue came lately under the consideration of the Marylebone County Court. Dr. Edwards, of Hyde Park, was consulted in reference to a lady who had been of unsound mind for a year, and in whom the symptoms were rapidly increasing, and, in addition to the mental excitement, she practised self-abuse to such an extent that an ulcerated mass had formed around the labia and clitoris from the introduction of certain foreign bodies into the vagina. This diseased tissue, acting as an irritant, excited a desire to masturbate, and Dr. Edwards, after consultation with Dr. Alfred

Meadows, decided to remove it. He informed the family of the nature of the proposed operation (which was not, however, clitoridectomy). As a result of the operation the masturbation ceased, and the patient improved in every respect, both mentally and bodily. Some time after it was decided to place her under certificate in a private family, Dr. Edwards visiting her once a fortnight, and acting as her medical attendant, under the Lunacy Act. He continued his visits until it was found desirable to transfer the patient to an asylum. Fees had been paid from time to time, and the patient, now passing out of the care of Dr. Edwards, the amount of his claim up to this time, which had been previously agreed to by the family, was naturally sent to the relatives. To his astonishment, it was disputed, and a counterclaim set up by the solicitor of mal-practice in performing the operation, and so causing the patient to become chronically insane. No mention of this was made until after a lapse of one year from the operation, when notice of it was given to Dr. Edwards through a solicitor. At the hearing of the case the chief questions which arose were what the effect of such an operation upon the mental state of a person would be, and whether it would be justified by the circumstances of the case. Many medical witnesses were in court prepared to testify as to the propriety of the operation. The judge evidently from the first entertained a strong opinion. Dr. Meadows was called and sworn, but the solicitor threw up the case, which, in our opinion, ought never to have been brought into court. Dr. Edwards had done everything in his power for the patient committed to his charge. He had not performed any operation without first consulting Dr. Meadows, and after communication with the family. He had acted quite professionally, and the judge endorsed this view in the highly complimentary manner in which he addressed him at the termination of the case.

THE ROYAL COLLEGE OF PHYSICIANS AND PRIVATE ASYLUMS.

At a general meeting of the College of Physicians for the purpose of formally admitting the Fellows who had been elected by the College, the President was asked whether the report was true that at the recent meeting of the Council to nominate the Fellows a resolution had been passed to exclude proprietors of private asylums from being admitted to the Fellowship of the College.

In reply he stated that as the proceedings before the Council were *strictly secret*, he did not feel himself bound to answer the question, but that he would do so by saying that no such

resolution had been made, and if it had it would be in the power of any future Council to upset it. A discussion here took place, when one of the Fellows, a Councillor, remarked that the question was not in order. This, however, the President, overruled. The same Fellow stated that he wished to clear himself from a report in circulation to the effect that he had proposed this resolution. We do not for one moment say that a formal resolution was passed, but it is quite possible for any member of the Council to have compared proprietors of asylums to hotel keepers, as has been done in one of the medical journals, and to have stated that it would have been derogatory for the College to have elected such persons to its Fellowship, and so prejudiced the minds of the Council, who might have agreed to this without passing any *positive* resolution. We are credibly informed that such was the case, and it answered the same purpose as a resolution. It was doubtless to this that the President alluded when he remarked that such a resolution might be thrown out next year if it had been passed.

We consider that if such a statement were really made and carried it was an insult to a large body of men, who have advanced science and literature in a way equal to most of their professional brethren.

THE HABITUAL DRUNKARDS BILL.

During the second reading of the proposed Act to legislate for the care of chronic inebriates, the Archbishop of York proposed that a clause should be introduced prohibiting dipsomaniacs from being taken care of in licensed houses as existing at the present day for the reception of the insane. This appears to us very absurd, and we regret that such a clause was allowed to be carried. Insanity and dipsomania are so closely allied, and the latter so often the cause as well as the effect of the former, that it appears difficult to draw a line of demarcation between them. The physicians who have the care of the insane should also be entrusted with the responsibility of supervising the individuals over whom the new Act is intended to legislate. We are of opinion that there should be some provision in the Bill enabling those under confinement for drink to be transferred to asylums upon their condition proving that the craving is the effect of some cerebral mischief, and not a disease *per se*, and presumably curable by restraint for some months. We cannot see how the present Act, framed as it is, can fulfil what was intended by the agitators in the matter who drew the attention of Parliament to the existing crying evil, and when we find, in addition, that the care and treatment of these individuals is, by

an absurd clause of the Archbishop of York's, taken out of the hands of those medical men who have made insanity and its ally, dipsomania, their special study, we shall not be surprised to find that the Bill will be a failure as to effecting any permanent cures.

GERALD MAINWARING.

From information and data placed in our hands respecting Gerald Mainwaring, convicted and subsequently reprieved for the murder of a police constable at Derby, we are in a position to give what we consider to be important facts connected with the case.

The prisoner received his earlier education at Rossall School, and after leaving school he resided with his father in Staffordshire. At this time it appears he evinced marked peculiarities; he became very taciturn, and avoided the society of others, preferring solitude to even the association of those most intimate, causing remarks and suspicions among his friends, so that even at this period he was considered eccentric. He left England in 1875 for Canada, remaining there for four years. Whilst there he conducted himself so far well as to avoid getting into any scrape, residing with Capt. Brereton, Stipendiary magistrate, in Toronto. He returned to England in 1879, in consequence of the removal of Capt. Brereton's family from Toronto, the death of his father, and disappointment at not receiving remittances from England, for which he had written in pressing terms.

Shortly after his return to England he visited his brother at Oxford, but whilst there only drank claret, stating that "brandy made him mad." But we shall have more to say upon this point when we come to the consideration of the hereditary predisposition to drinking and the general effect that alcohol appears to have had upon members of his family. One peculiar feature, and what we consider to be most material in connection with his case, is the circumstance that none of the prisoner's family ever saw him the worse for liquor, so we are credibly informed.

With regard to his antecedents, we have reason to believe that other members of his family were equally liable to become affected from indulgence in alcohol.

We thus have a man who, from his own statement, had a horror of strong drink, and evidently keen and apprehensive as to the danger of imbibing brandy, but at the same time one who could be easily led astray by any person who endeavoured to guide him in the wrong direction, of strong animal passions, and by nature headstrong.

The murder was committed on July 12, and we have evidence of the prisoner drinking incessantly from the 10th to this date, the liquor chosen not being ordinary wine, but brandy, of the effects of which he had such a fearful dread, as appears from the remark made to his brother at Oxford that "brandy made him mad." Once, however, forgetting this circumstance, and indulging, it was impossible for him to desist. The more brandy he took so the fatal fire gradually increased, until it accumulated in one maddening flame, rendering his brain in such a state of excitement as to make him not only heedless of what he did, but ignorant of the gravity of his acts, and consequently irresponsible for his crime.

The question for the jury was, whether his state was such as that he was to be held irresponsible for the murder, and, whether a verdict of manslaughter or murder should be returned. To determine this vital question the jury were upwards of three hours in deliberation, evidently showing the grave doubts which must have existed in some of their minds. One most important fact is, that the jury unanimously signed and forwarded to the Home Secretary a petition expressing their conviction that the prisoner was, at the time he fired the pistol, "in a state of complete intoxication, and had no intention of doing an illegal act, or deliberately inflicting harm on the deceased, Joseph Moss, or any other person."

With regard to the way in which they arrived at their decision it is no province of ours to discuss; suffice it to say, that it will doubtless prove a deathblow to trial by jury when scientific questions are involved. We have frequently advocated the necessity of medical assessors, and had they been employed in this case, a British jury would never have come to the conclusion that Gerald Mainwaring had committed wilful murder with malice aforethought, and that at the time he did so he was in such a normal mental state as to be held responsible for his actions.

LUNACY CERTIFICATES.

Under the existing state of our Lunacy Law a person can be confined in an asylum on two lunacy certificates, which may be signed by any two medical men who may be ignorant of the very elements of insanity. Those who sign these documents must examine the patient separately, in order to elucidate the indications of the mental disorder. There is no clause relating to lunacy certificates that prevents the two medical men from consulting together either previous or subsequent to the certifying of the lunatic. We have carefully looked through the Act, and cannot find any section which can be so construed. The

question has, however, of late been discussed, and we take the opportunity of drawing the attention of our readers to it. There is no doubt but that the important question of confining persons in asylums should receive the careful attention of the Legislature; but it is difficult to suggest anything in lieu of the present system. Lunacy certificates must exist, but the granting of them must be differently arranged, either by some officially appointed assessors, or by members of the profession, who must be licensed to sign certificates in the same way as some solicitors are authorised to deliver oaths in the Supreme Court of Judicature, and this only after they have proved themselves competent to be considered as sufficiently versed in mental disorders. As long as the present system is in force, so long will the practice of signing lunacy certificates be open to grave suspicion. If a certificate is not signed by a specialist, or one who has had experience in mental disorders, there is invariably some omission or mistake which, though not invalidating the document, will, nevertheless, cause much trouble to the official Board who have to peruse carefully all the certificates. At the present time the forms are too complicated, and consequently those who sign are liable to make some error, and they might with advantage be improved.

LUNACY LAW AMENDMENT.

The reply of Mr. Secretary Cross to a question respecting an amendment of the Lunacy Acts, has cleared up many of the wild suggestions which have been bandied about as to supposed material alterations in our existing laws. It was to the effect that Mr. Cross would put himself in communication with the Commissioners in Lunacy on the matter. The very best answer that could possibly have been given. The Commissioners in Lunacy, having the entire supervision of all persons of unsound mind and the visitation of asylums and institutions for the insane, are fully aware of the present working of the Lunacy Laws and of its shortcomings; so that we may now expect an amendment in clauses which will be beneficial to all those interested in the care and treatment of the insane, and which we trust will protect the proprietors and superintendents of asylums from a possibility of the base insinuations which have of late been so freely made against them. We hope some consideration will be given to the question of allowing persons addicted to intemperate habits to place themselves voluntarily under supervision in an asylum. Under the present existing state of the laws, for anyone to be received as a boarder in an asylum, he must have been previously a certified patient in an

institution. We have carefully examined the report issued by the Lunacy Committee who sat during last session, and we must confess we are unable to find any suggestions there worthy of the attention of the Commissioners with a view of amending the Lunacy Law. We are very glad that a Lunacy Committee was appointed, as it enabled society in general to find out that the allegations of discharged lunatics must be received with grave doubts and caution. Much time would have been saved if the Committee had examined the Commissioners and Government officials previous to their admitting the evidence of former inmates of asylums, which, to a certain extent, prejudiced some individuals. The accusations so made, and which were proved afterwards to be purely imaginary and delusive, naturally draw our attention to the fact that but little credibility should be given to the wild and exaggerated statements made by persons of unsound mind in courts of law. But it is to be regretted, however, that the public are too anxious to believe such *innuendoes* without further investigation, and to condemn innocent persons who have been so unjustly attacked upon *ex parte* statements.

PSYCHOLOGICAL PECULIARITY.



THE CEREBROSCOPE.

THE INVENTION OF A NEW YORK PHYSICIAN—THE PHYSICAL
DEMONSTRATION OF MENTAL ACTION A POSSIBILITY—AN
INVENTION GREATER THAN THE TELEPHONE.

THE following is from a New York journal.

Our arrival was communicated to the doctor by an electric bell, and, after an answering stroke, we were ushered into the presence of the great man, who arose from his comfortable high-backed ecclesiastical chair to receive us.

Upon stating the object of our visit, he somewhat reluctantly acknowledged his invention and its probable value to science. "We have many instruments of precision in medicine—the ophthalmoscope for examining the eye, the sphymograph for determining the variations of the pulse, the otoscope, the stethoscope, endoscope, and various others, not to forget the æsthesiometer, dynamograph, and the differential calorimeter of Lombard, which enables us to detect the slightest changes of temperature in the human body; but I consider none of them half so wonderful as the apparatus I have just discovered, to which I have given the name cerebroscope. With this instrument it is literally possible to 'read the mind's eye;' and I can predict a great revolution in the treatment of mental diseases."

"In what does the theory consist, and upon what principle is the instrument constructed, doctor?"

"I have spent many years in experiments, and now that the new purple colouring matter of the retina has been discovered, I am able to definitely demonstrate that it is by no means an impossibility to watch the various workings of the intellect reflected upon this colouring matter at the bottom of the eye. You are aware that with activity of thought the blood supply of the brain is increased, but the retinal blood supply is also augmented as well, and consequently the pigment

of the cells of the membrane behind the retina is constantly changed. With certain varieties of mental action there is a mathematical grouping of these pigment or colouring cells, and by the examination and comparison of upwards of 70,000 eyes during the last eight years, I can positively say that certain kinds of cerebration are connected with different forms of polarisation of these cells, so that negative attracts positive and repels negative."

Reporter. "Will you tell me, doctor, what led to this discovery?"

Doctor. "As far back as 1858, while at Fort Kelly, I was enabled to make an examination after death of the brain and eyes of a man who had been suddenly kicked to death by a mule. In this little bottle"—and the Professor held up to the light a very small vial containing a glistening purple substance—"is the 'visual purple' extracted from both eyes of this soldier. It took me forty-eight hours of laborious work to remove the pigment from the eyes, which were immersed in absolute alcohol, placed in a freezing mixture. My discovery of this substance antedated that of Boon or Bael, a German savant, by about sixteen years. I have been able since, by the exceedingly delicate instrument of Lombard, to test the variations of temperature in and outside of the eye, and find that a current of tepid water, circulating in a rubber tube about a water-glass containing a few drops of a solution of this colouring matter, produces an arrangement of cells, identical with that which takes place in the eye when the increased blood in the vessels of the eye and brain bring the retina to a temperature of less than 0.6341 centigrade."

With the assistance of his polite, young, and intellectual assistant, the instrument was brought forward. It resembled somewhat the demonstrating ophthalmoscope used occasionally by oculists. There was a firm stand, with an upright, which held a plano-convex mirror perforated at its centre, while about the periphery there passed a band of copper, and from points equidistant extended small rods of selenium which converged towards the centre, slightly overlapping the perforation. A series of wires connected these rods with a delicate tangent galvanometer which rested upon a small shelf.

Six mirrors reflected the powerful rays of an oxyhydrogen light, the pencil of which consisted of zirconium instead of the ordinary lime.

Converging beams of light were thus sent through the perforation and direct through the pupil of the person examining, while behind the instrument sat the observer, whose eye was placed to the central opening.

"You will observe," said the doctor, "that the rearrangement of the 'visual purple' cells at the bottom of the eye cause the generation of heat: this and the light sensibly affect the selenium, which, you know, is highly sensitive, and an electric current is generated by this metal, and the copper is immediately shown by the galvanometer needle. Now, please, sit in front of the instrument and engage your mind—think! concentrate your attention!"

With some misgivings the reporter took the seat assigned to him. Concentration of thought was difficult. He looked at different objects in the room; at first upon a piece of old blue and white china upon the wall; next at an Egyptian scarabæus of colossal size, then upon a door-knob; but under the excitement of the moment it was as utterly impossible to indulge in one line of thought as to go to sleep when tortured by the cares of the day which chase each other through the weary brain of the overworked newspaper man who craves rest. In the midst of this indecision of mind, our representative involuntarily calculated the cost of certain articles of furniture and decoration about the room, and from this the question of the fees that such a great man must receive to pay for these luxuries came to his mind. The doctor, whose face had worn a troubled, impatient expression during ten minutes or more, while the needle remained perfectly motionless, burst into a hearty laugh and informed us that the mathematical arrangement of the cells then visible was one quite familiar to him. "I have seen it," said he, "in many of my apprehensive patients, who were calculating the probable charge I would make for my services, and, though I cannot state with absolute accuracy the nature of your thoughts at this moment, I can say they were upon the subject of medical fees."

Anxious to witness for himself the workings of the instrument, the reporter asked permission to examine the eyes of some person in the room, and with great amiability and modesty the doctor consented to be the victim of the experiment. The gas was turned on, and the oxyhydrogen light sputtered and crackled, and with a feeling of some nervous agitation we seated ourselves. It would be difficult to describe the appearance of the great inventor's eye. There were corruscations of brilliant purple which shot off scintillations of golden light, while the retina resembled some gorgeous piece of Pompeian tessellated pavement. The figures, however, constantly changed, though there was a certain fixation of parts which seemed to undergo but slight alteration. "What is the curious ring of cells which extend almost entirely about the retina?" we asked. "Ah!" replied the doctor, "that is the circle of self-satisfaction;

but you will observe it does not quite extend around the entire periphery as it does sometimes when there is entire belief in one's self. Why, in some of the lower animals this ring is entirely developed. In such creatures as the bull-frog (*Rana temporaria*), the domestic cow, the ass of commerce (*Asinus vulgaris*), or the ordinary counter-jumper (dry goods clerk *Capricornus*), the cell arrangement of this kind undergoes but little variation."

By means of a mirror the doctor pointed out a very indistinct group of cells, and upon being questioned, stated that the most prominent were those which indicated a peculiar inventive genius. He had observed these quite markedly developed in Mr. Barnum and Mr. Bunnell of the Bowery museum. "Strange to say," remarked the doctor—"and I regard it only as the inconsistency of the instrument—these appear in my eye to grow larger, year by year." The middle groups of cells indicated literary ability of no mean order, and I afterwards found that the doctor was the author of a very successful novel, which has been read at thousands of American firesides.

Clustered about the large central veins of the retina were some nondescript cells. "Ah, my dear sir," said the doctor, in reply to our interrogatory, "those are the cells of reform, as I have called them. I have found them in the eyes of Mayor Cooper, Mr. Comstock, the Count Joannes, and others. They are differently developed in different eyes. In Mayor Cooper, for instance, they only reach a certain size, when the cerebral circulation becomes so much changed by confused thought and the clouding of the centre of judgment and reason, that they become blotted out or eclipsed by the cells of prejudice. In Comstock's case the cells take an irregular form, and their edges have a prurient aspect. In the eyes of several thousand generals, judges, vice-presidents, leading clergymen, politicians, and cracksmen, I have examined, these cells of reform have varied greatly. If you were to place this piece of army blanket that I have kept since 1865, which you see is transparent, before the instrument, you will have an extended view. My cells of reform you see, are one-sided and distorted, but they show that the lunatic asylums are the objective point to be attacked. I would abolish asylums altogether, for it is both injudicious and useless to restrain lunatics; and besides, where is my expert business to come from? Now there is the famous Utica bed discovered by a French *abbé* over 200 years ago——" We placed the blanket over the opening, the threads of yarn forming a micrometer, and lo, the appliance at the bottom of the eye underwent a kaleidoscopic change! In the upper right-hand corner we saw a picture of a strong man attacked by robbers, while pistol balls

seemed to fly from his charmed fingers like lance points from the cuirass of an armoured knight. Surely the doctor's most concentrated thoughts were of a pleasant kind, for the cells had grouped themselves so that, occupying a central position, and covering almost entirely the field, was a large head of himself, smiling contentedly. In his hand he held a pen with which he was writing an "open letter," while wriggling vibrios fought with an army moth for the possession of an old military button and a major-general's shoulder-strap. The doctor was lost in reverie; his mind was filled with lawsuits, convents, after-dinner speeches, fasting girls, Manhattan Beach rambles beneath the moon, and a host of other subjects of thought, while their reflecting prototypes were reflected in the visual purple. We were lost in wonderment at the dazzling genre picture, and in our nervous excitement accidentally kicked the doctor's foot, when suddenly the myriads of beautiful pictures vanished as quickly as they appeared, and, with a half apologetic smile, and wave of his graceful head as he noted the expression upon the face of the reporter, he said, "I fear the instrument has not shown truthfully my exact mental condition. It is not yet perfect." But assuring him of our perfect satisfaction, and saying we believed it had done him full justice, we left, wondering how completely the world would be metamorphosed when the cerebroscope was generally introduced.

We understand that Manager Abbey has deferred the production of Gilbert's "Palace of Truth" until he can personally examine the apparatus.

MEDICAL PROPRIETORS OF PRIVATE ASYLUMS.

THE remarks which have appeared in the *British Medical Journal* during the year, in reference to Private Asylums and their Proprietors, render it imperative for us to make some observations on the subject, in order to dispel an erroneous impression which appears to have imbued the public mind.

In the issue of that Journal for May 3 we read: "It cannot be too much insisted upon that the allegation against the proprietors of private asylums is not that of *mala fides* in taking, detaining, and confining persons of sound mind as lunatics, but that they detain persons of unsound mind whose confinement within their walls is unnecessary and unlawful."

We must confess that we are at a loss to understand the latter part of this paragraph. It is a difficult thing to conceive how it is possible to "detain persons of an *unsound* mind" in an unlawful manner. If an individual is of unsound mind, and placed legally under lunacy certificate, surely it is lawful to detain such a patient until the lunacy disappears, or until the person who signed the "order" authorises the discharge from the institution. And yet this is brought forward as what the proprietors of private asylums are guilty of. From the style of the various articles, proprietors of asylums may be said to resemble second-class hotel keepers, whose interest and whose sole desire is to make as much profit out of the inmates with as small an outlay as possible, and to make only an outward show, without any consideration for those committed to their charge. They have been styled "adventurers." In order to strengthen a possibility of a case, the evidence given by Lord Shaftesbury before the Committee in 1859 is quoted. We may, however, remind the readers of these articles that the treatment of lunatics at the present time differs materially from what it did twenty years ago, and it appears strange that resource should have been made

to this in order to prejudice the public mind. Let us, however, quote Lord Shaftesbury's evidence, as given before the Select Committee of last year, as an extraordinary contradiction to what he said in 1859, and which is quoted in the *British Medical Journal*, in reference to the following question put to his Lordship by the Chairman of the Committee, the Hon. Stephen Cave, as to the abolition of asylums: "The case has been stated in two ways to us; one is, that if you have all the private asylums abolished you get rid of the interest which the superintendent has in the insanity of the patient; but, on the other hand, you get rid of the interest which he also has in making his asylum popular by good and generous treatment of the patient?" To which Lord Shaftesbury replies: "No doubt. Their object is, it is assumed, by good treatment and by the number of cures, and everything of that kind, to incite rich patients; and their object, it is also assumed, is to turn out the poorer patients as soon as they can. Unquestionably, there exists a principle, and desire of profit, and so long as there are licensed asylums on any great scale, the public will always conceive that the principle of profit will, of necessity, predominate. And, indeed, the state of things before 1859 was very bad indeed. But at present, from a variety of causes, the licensed houses are in a far better condition in every sense of the word; more is expended on them by the proprietors, and I must do them the justice to say that the change is very great, and so far as the evidence I gave in 1859 is concerned, I should not give it now. I can speak in high terms of many licensed houses and proprietors, but I will also add, that if you relax your vigilance ever so little, whether it be of licensed houses or of hospitals, or of county asylums, the whole thing will speedily go back to its former level."

In reply to a question put to Lord Shaftesbury in reference to the improvement in private asylums, his Lordship said:

I should like to show you what a great improvement has been made in that respect; I do not know I should go so far as to enact that by law. In the first place, such an enactment would shut out many proprietors who keep excellent establishments; and, next, because it often happens that the

proprietor is a man of capital, and can provide all that is necessary, and then he will appoint as his medical superintendent a first-rate medical man. Now we have a great number of very first-rate medical men who have no capital at all, and therefore could not set up a house. Therefore, though it is desirable that the proprietor should be a medical man, yet I would not so bind it down by law that he should be so, for the reason I have just mentioned; I will show the honourable Member how that system has been growing up, and with great public advantage. Comparing the year 1845 with the year 1876, I find that the number of resident medical proprietors was 53 per cent. in 1845 upon the whole number, and in 1876, 66 per cent. It is going on in a very satisfactory way. The improvement in the licensed houses under the medical proprietors is very great in a variety of ways, not only as to amusements that are provided, but the greater amount of domestic life, so to speak; the system of boarders also has been much encouraged, and with benefit. It very often happens that a husband comes to reside for a time with his wife as a boarder, and the wife resides with the husband. There are a thousand things in the licensed houses now that are of the highest possible order for the amusement and comfort of the patients. Somebody asked how that has arisen. It has arisen by the influence of many things combined; it has arisen from public opinion. Public opinion is very much alive to these things compared with what it was. It was utterly dead; and even as far back as 1859 people were not easily moved to consider these matters, but of late years it is astonishing to what an extent they have been inquiring into it. All that movement acts upon the minds of the superintendents and others. Again, there has been increased visitation. Then there has been what the honourable gentleman has just referred to, a great increase in the proportion of resident medical men, and they are far better men. I wish the Committee could have seen some of the persons who were in charge of the lunatic asylums when we first began this work; any more uncouth, more ignorant, more coarse, and more inadequate to the duty it is impossible to conceive. Then, again, the character of attendants is very much improved indeed. I think the honourable Member for Swansea

made a remark that he supposed it was owing to the Commissioners being more attentive to their duties. I think that was rather a harsh question, and with due deference to that honourable member I should like to say the Commissioners have not been more attentive to their duties; they were always attentive to their duties; they were always attentive from the very beginning. That I can answer for."

Sir Trevor Lawrence put the following question to his Lordship:

"So far as your Lordship's experience goes, are you of opinion that lunatics are better treated in the public asylums than in the private licensed houses?—Not now; they were so, I have no doubt, at one time. I am quite sure that there is admirable treatment now in many of the licensed houses. There is good treatment in very many of the hospitals; but I should say licensed houses vie perfectly with the hospitals."

Again, as to the abolition of private asylums: "I am decidedly against their being done away with by the prohibition of the law, because, as I said before, I am certain some licensed houses ought to exist. There are a great number of people who will prefer them for their relations. The treatment that you get in the licensed house where it is well conducted will always be more of the domestic character. I was saying that by the extension of the hospital system, that is of the public system, I believe a great number of the inferior houses will be eliminated and got rid of, and the few that would survive would be very good."

"Are you of opinion that it would be prejudicial to advance in the treatment of mental disease to do away with licensed houses?—Most undoubtedly."

The Editor of this journal issued a circular to asylum proprietors, in consequence of which the *British Medical Journal* made another attack upon asylums and their proprietors. Dr. Winslow, however, in speaking of the remarks on the circular, says:

"With regard to your remarks on the circular letter which I forwarded to the proprietors of asylums, I consider that the time has now come for the formation of some society for the

protection of the mutual interests of those officially connected with private asylums, as we cannot depend on receiving the unanimous support of the medical journals, who have compared private asylums to hotels, and who have taken up the cudgels against us, rendering it imperative that some such society should be formed to maintain the integrity of our calling. We are all interested in one common object—the welfare of our patients and their restoration to a sound state of mind and body. I pronounce the base insinuations that have been brought forward, in some of the public as well as medical journals, as groundless and false; and I challenge those who are opposed to private asylums to adduce one single instance of the illegal detention or confinement of persons wrongfully in these institutions; and what strengthens my assertion is the fact that the late Lunacy Committee, in their report now before Parliament, stated that, notwithstanding the several accusations brought against private asylums, in no instance was *mala fides* proved; and this statement was not given after a trivial investigation, but after an inquiry of very lengthened duration, extending over a whole session, and examining witnesses on both sides.

“This of itself should have put a stop to the credibility of the accusations that have been made, but which, from time to time, crop up afresh, without, however, a single iota of evidence to support them.

“You state that we should depend for our protection upon the medical profession generally. I say, in reply to this, that we have not received that support to which we are justly entitled; and we must, therefore, endeavour to obtain assistance elsewhere. I am, consequently, forming an association for the protection, not only of our general welfare, but of that which to every Englishman is more dear: his reputation and his honour. And in stating this, I endorse the opinion of a large proportion of those medical men with whom I have been in communication, both public and private asylum proprietors, who naturally are indignant at the aspersions which have been so plentifully directed against them. It is a difficult matter, however, to suggest improvements in the system, as all asylums

are already under such efficient supervision; but, if anything could be done at the present time to prevent the possibility of wrongful insinuations, by further protecting the proprietors and medical superintendents of private asylums, it would be hailed with satisfaction by a large body of men who have the interests at heart of those committed to their care, and whose only crime is to

Fetter strong madness in a silken thread,
Charm ache with air, and agony with words.

What a holy and honourable calling is this! and those who labour in the field should not be harassed and baffled in their endeavours to 'minister to a mind diseased.'"

Is it just that the proprietors of private asylums should be especially held up to opprobrium? The study of mental science is the highest specialty, and gentlemen engaged in it are no more likely to make a market of their patients than those engaged in any other branch of the profession. Without in the slightest degree wishing to detract from the merits of the superintendents of public asylums, who number amongst their class some of the leading cerebral psychologists of the day, it should not be forgotten that the proprietors of private asylums have to deal with the educated classes, who essentially require more intellectual acquirements to cope with their maladies than those who have only paupers to treat, and the maligners of private asylum proprietors should be reminded that some of the most illustrious members of the profession have been proprietors of private asylums, and when we mention such distinguished names as those of the late Drs. Forbes Winslow, Conolly, Sutherland; and of Drs. Maudsley, Blandford, Boyd, Tuke, Wood, Lush &c.; and that of the accomplished scholar, Dr. Steward, late of Southall Park, who was selected by the Royal College of Physicians to deliver in Latin the Hunterian Oration in 1855; and remembering the remarks made by Lord Shaftesbury, we emphatically affirm that there is no justification for the aspersions which have been so freely cast upon the proprietors of private asylums.

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AND
MENTAL PATHOLOGY.

EDITED BY
LYTTLETON S. FORBES WINSLOW, M.B. D.C.L.

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THE JOURNAL
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ART. I.—THE COLLAPSE OF SCIENTIFIC ATHEISM.

By J. M. WINN, M.D., M.R.C.P., &c.

It must be admitted by every candid and unbiassed observer who has watched the controversy between the supporters and opponents of the materialistic theories, that have so sorely perplexed the public mind during the last five years, that the fabric on which they have been reared is baseless and tottering to its fall—in other words that scientific atheism is “played out.” Nevertheless, although our opponents have been completely beaten in a regular stand-up fight, they still persist, with a stubbornness worthy of a better cause, and with a strange obliviousness of facts, to oppose their light but poisoned arrows of fiction to our heavy artillery of facts; and if they will persevere in airing their dangerous dogmas in print, we are forced, at the risk of being tiresome, to bring forward again our battery of inexorable scientific truths. This is no idle boast, and we shall proceed to show, by the irresistible logic of facts, the fallacies and inconsistencies of the theories which have been arrogantly paraded by their authors, under the garb of science. To prove this position it will be necessary to pass in review many of the facts and arguments which I have from time to time published in the *Journal of Psychological Medicine*.

To the British Association for the Advancement of Science is due the unenviable distinction of having inaugurated, through their former President, Dr. Tyndall, the infidel doctrines which have of late poisoned the minds of thousands, through the medium of the public press, which has conveyed his baneful teaching even to our very thresholds, and, we fear, made ship-

wreck of the faith and hopes of numbers of the rising generation.

We would be the last to check the spirit of scientific inquiry, but there are scientific publications enough for the discussion of any hypotheses, however extravagant. Surely, then, the President of a public body might, for the sake of humanity, pause before loudly proclaiming to the world unverified theories, which he must be aware would, if true, subvert the fundamental principles on which all our morality and polity are based.

As an antidote to the school of false philosophy, to which the Professor belongs, I published in the *Journal of Psychological Medicine* for April 1875, a paper* containing arguments diametrically opposed to those of Dr. Tyndall and other materialists; and as they have taken, and still take, every opportunity to bring forward any hypothesis, however extravagant, in favour of materialistic infidelity, I shall have no hesitation in taking up *seriatim*, as I have done before, the chief points of scientific atheism, which have given rise to so much controversy during the last few years, for reconsideration and confutation.

Omnipotence of Atoms and Physical Forces.—Dr. Tyndall, who believes in the Almighty Atom, showed his atheistical proclivities by quoting in his ever-to-be-deplored address the following passage from Lucretius, for whom he evidently has unbounded admiration:—"If you will appreciate and keep in mind these things, Nature, free at once and rid of her haughty lords, *is seen to do all things spontaneously of herself, without the meddling of the gods.*" He also said that he saw in matter "the promise and potency of all terrestrial life." The Professor does not seem, however, to be quite satisfied of the truth of this marvellous statement, for he subsequently confessed, with an inconsistency so common with his school, that "it is not in hours of clearness and vigour this doctrine commends itself to my mind; that in the presence of stronger and healthier thought it ever dissolves and disappears, as offering no solution of the mystery in which we dwell, and of which we form a part." By this self-contradiction he left his molecular theory unsupported; and yet from his subsequent writings there is strong reason to fear that Dr. Tyndall has not experienced many of those lucid intervals, in which the doctrine of materialistic atheism ceases to commend itself to his mind, and it must therefore be concluded that he is still wandering in the dark and dreary region of atheism; for, in his answer to

* *Materialism.* Subsequently published in a separate form, with Appendix, by David Bogue, No. 3 St. Martin's Place, W.C., London.

his opponents in the *Fortnightly Review*,* he dogmatically asserts that "the conclusion of pure intellect points this way [to scientific atheism] and no other!" We will proceed to show that the reasoning on which he and others attempt to establish their infidel doctrines, is, like that of the rest of the school, not the expression of pure intellect. but rather the visionary speculation of those who have allowed their judgment to fall asleep, and given unbounded reins to their fancy. We presume Dr. Tyndall would call this "the scientific use of the imagination;" but the question at issue is of such vital importance, that the imagination, however useful in framing scientific hypotheses, must be kept in abeyance, and in the present inquiry we shall take nothing for granted at the hands of our adversaries, but rely solely on the evidence of absolute facts.

We would premise the observations which we are about to make, before entering upon details, with the fundamental axioms, that admit of no reasonable doubt, that there can be no laws without a lawgiver, and no effect without a cause. Now, all scientific atheists admit that the universe is regulated by laws, but by a strange perversion of reasoning they ignore a Lawgiver. They also deny a superintending Providence. If a clock of human construction requires careful supervision, is it incredible that the vast wheels of the universe, which revolve with more than chronometer-like precision, should require to be guided by a Being of infinite intelligence and power? We would be the last to limit the power of the Creator, and it is quite conceivable, as has been often suggested, that the machinery of the universe was created in such a manner that it could go on for ever without further help. It is an authenticated fact† that there is a constant dissipation of energy from the sun; that its heat is constantly passing away into space, and no compensation has yet been discovered. Who can restore this lost energy save He who first called it forth? But the Positivists believe that the so-called physical energies now in operation on the earth are all-sufficient, and do not need constant renewal, and that there is therefore no Almighty Force required above them all. But surely faith in an eternal omnipotent power is more consonant with the common sense of mankind than the atheistical doctrine that the laws and physical forces of the universe are eternal and unalterable.

* For November 1875.

† Mr. Justice Grove, the highest authority on the subject of Conservation of Energy, in his Address before the meeting of the British Association in 1866, stated that the sun and the planets were incessantly radiating heat into space, and that science had not yet shown how the energy can be restored.

The belief in a superintending and sustaining Providence is also more in harmony with man's moral nature, for it gives the consoling conviction that the Power which can restore physical energy can also give support and fresh mental vigour to fainting humanity.*

If the materialist will not accept the theory of an eternal Creator, he is inevitably driven to the monstrous conclusion that atoms are all-sufficient in themselves—in fact, endowed with higher faculties than human beings—and believe with Giordano Bruno and Dr. Tyndall that, “Matter is not the mere naked *capacity* which philosophers have pictured her to be, but the universal mother who brings forth all things as the fruit of her own womb.”† After this expression of opinion, it is unfair for Darwin, Tyndall, and others, when they find that they have shocked the public feeling, to say that they do believe in a God (after their own fashion). It is by the help of such an empty protest that many of their admirers, who have not time or opportunity to examine their arguments closely, are led to adopt and believe in doctrines which cannot be proved by the inductive process of reasoning. One of the most extraordinary attempts of the atomists, and one which has completely broken down, is their strange endeavour to account for animal and vegetable growth by molecular forces. The examples which were chosen to support the hypothesis were singularly unfortunate; for instance, in order to illustrate the sufficiency of matter to produce all the marvellous beauty of the vegetable world, Tyndall draws a most illogical comparison between the growth of a tree and the action of an ingenious acoustic instrument devised by Sir C. Wheatstone, which Dr. Tyndall describes in this manner: “There is an experiment, first made by Wheatstone, where the music of a piano is transferred from its sound-board, through a thin wooden rod, across several silent rooms in succession, and poured out at a distance from the instrument. The strings of the piano vibrate, not singly, but ten at a time. Every string subdivides, yielding not one note, but a dozen. All these vibrations and subvibrations are crowded together into a bit of deal not more than a quarter of a square inch in section. Yet no note is lost. Each vibration asserts its individual rights; and all are at last shaken forth into the air by a second sound-

* Since writing the above, I have found in the first number of the *Modern Review*, an article by Dr. W. B. Carpenter, on *The Force Behind Nature*, in which he gives in his adherence to the principle of a superintending Providence. As he is one of the leading physiologists of the day, his recognition of a sustaining Power is a gratifying circumstance. He observes: “I deem it just as absurd and illogical to affirm that there is no place for a God in nature, originating, directing, and controlling its forces by His will, as it would be to assert that there is no place in man's body for his conscious mind.”

† *I* vide Dr. Tyndall's Address at Belfast.

board, against which the distant end of the rod presses. . . . I turn to my tree and observe its roots, its trunk, its branches, and its leaves. As the rod conveys the music, and yields it up to the distant air, so does the trunk convey the matter and the motion—the shocks and pulses, and other *vital actions* which eventually emerge in the umbrageous foliage of the tree.” It requires only a small acquaintance with the first principles of acoustics and vegetable physiology to see the fallacy of this parallel. One part of it is merely an illustration of the mode in which sounds may be conveyed rapidly to a great distance, by a vibrating medium. Far different is it with the other part of the parallel—with the gradual growth of a tree, which requires for its accomplishment a variety of processes, under the control of *vital force*. Dr. Tyndall is himself driven to the necessity of using the words *vital actions*, although he denies the existence of vitality.

Another assertion of the atomists is that vital actions are almost as physical as those that lead to the coalescence of two globules of oil suspended in a mixture of alcohol and water, which do not unite until the pellicles that have formed around them burst. From similar combinations, mounting up step by step, from one to another, it was imagined that a living body was constructed. Had the atomists recognised the wonderful facts revealed by the microscope, which some physicists are apt to despise, they would have perceived that the oil globules, with their pellicles, are totally different from the germinating cells of which a living body is built up. The original and profound observations with the microscope by Dr. Lionel Beale have shown beyond contradiction that these minute cells have the powers of absorption, motion, and proliferation, and are, in fact, true living germs, admitting of “no analogy to any non-living matter whatever.”*

An equally improbable hypothesis was brought forward by Professor Huxley, who thought that a crystal and a living structure were analogous, and that both were the result of physical forces. A chemist can produce a crystal by various combinations; he can dissolve it, and afterwards reproduce it by evaporation, which cannot be done with any animal or vegetable organism. There is not the slightest resemblance between the minutest living being and a grain of salt, and a crystal as much resembles a life-cell as an icicle does a warm, living, palpitating animal.

We must then come to the inevitable conclusion that the molecular theory of life has completely broken down, and that life, this birth, this growth, this mystery which we cannot com-

* *Vide* Dr. Lionel Beale's *Lumleian Lectures On Life and on Vital Action in Health and Disease*. J. and A. Churchill, London, 1875.

prehend must have been superadded to matter after the creation of the earth.

Bathybius.—Little need be said respecting this young pretender. He never had the ghost of a fact to support his claims, and has very properly been disowned by his own parent. A year since, I made the following observation respecting this *lusus naturæ**: "Of all the ephemeral pseudo-philosophic discoveries, the one which a short time since most alarmed all sober thinking people and delighted the scientific atheists was Huxley's—that life sprang from deep sea mud. Huxley named his wonderful discovery, out of compliment to Hæckel, *Bathybius Hæckelii*. The joy of Strauss was without bounds. Here was the link that was needed to join the organic with the inorganic world, and the superstitious belief in a Creator had received its death-blow. This is what he says, in *The Old Faith and the New*†: '*Huxley has discovered the bathybius, a shiny heap of jelly on the sea bottom; Hæckel what he has called the moneres, structureless clots of an albuminous carbon, which although inorganic in their constitution, yet are capable of nutrition and accretion. By these the chasm may be said to be bridged, and the transition effected from the inorganic to the organic.*' Since this was written Huxley himself has abandoned the muddy notion of bathybius."

Spontaneous Generation.—This extraordinary idea, opposed to all experience, which had, strange to say, some enthusiastic supporters, even among men of science, two years ago, has vanished into thin air. It is singular that we should be indebted to Dr. Tyndall, the high priest of Materialism, for the complete contradiction of this materialistic figment. Every one must admit that the Professor is almost unequalled as an experimenter; and we must not forget our obligations to him for so candidly exposing the fallacies of a theory that would have given so much support to the creed which he unfortunately upholds. He published a full and faithful report of his experiments in the *Nineteenth Century* for January 1877. He made a thousand experiments on infusions of vegetable matter, heated to a temperature sufficiently high to destroy all vital organisms, and he found that no sign of life could be discovered in any of them, unless by any chance external air, containing germinal matter, had been admitted. Virchow, the eminent physiologist, confirms Dr. Tyndall's observations. I quote his remarks as they appeared in the *Times*: "Moreover the *generatio equivoca* which has been so often contested, and so often contradicted, is nevertheless always meeting us afresh. To be sure, we

* *Vide* an article on *Modern Pseudo-Philosophy*—*Journal of Psychological Medicine*, vol. iv., part I. New Series.

† *The Old Faith and the New*, p. 188. Asker & Co., London, 1873.

know not a single positive fact to prove that a *generatio equivoca* has ever been made—that there ever has been procreation in this way; that inorganic masses such as Carbon and Co. have ever spontaneously developed themselves into organic masses. Nevertheless, I grant that if anyone is determined to form for himself an idea of how the first organic being could come into existence of itself, nothing further is left than to go back to spontaneous generation. This much is evident. If I do not choose to accept a theory of creation; if I refuse to believe that there was a special Creator who took the clod of earth and breathed into it the breath of life; if I prefer to make for myself a verse after my own fashion (in the place of the verse in Genesis), then I must make it in the sense of *generatio equivoca*. *Tertium non datur*. No alternative remains when once we say ‘I do not accept the creation, but I will have an explanation.’ Whoever takes up that first position, must go on to the second position and say;—‘*Ergo*, I assume the *generatio equivoca*.’ But of this we do not possess any actual proof. No one has ever seen a *generatio equivoca* really effected, and whoever supposes that it has occurred is contradicted by the naturalist and not merely by the theologian.”

In the face of these facts, who will be so bold as to believe in spontaneous generation?

Evolution.—It is a melancholy satire on the credulity of mankind that this unverified theory of pseudo-philosophy should have taken such a firm hold on the minds not only of numerous laymen, but also of some weak-minded or faint-hearted clergymen. With a timidity unworthy of their creed—which has been glorified by the blood of the noble army of martyrs and the heroic deeds of the Crusaders—men of high position in the Church are endeavouring to reconcile it with the atheistical doctrine of evolution, and making a miserable attempt to adapt Christianity to Darwinism, instead of fighting manfully, not only against the world and the flesh, but also against evolution. They imagine that all may be made smooth by admitting that the primordial germ was created—not produced—by spontaneous generation or the potentiality of atoms. They do not seem to be aware that if they admit that the first germ was created millions of years ago, and was sufficient to develop all the endless and complicated forms of life which are found at the present day upon the earth, it must follow that the necessity for a watchful and superintending Providence is done away with. This Theistic form of evolution removes the Creator so far from us and our sympathies that He becomes a mere vanishing point in the dim vista of infinity. They have recently had recourse to another expedient. They attempt to draw a line between the evolution of animals and the origin of

man. The latter, they say, was produced by a special creation, the former by development. This is virtually a surrender at discretion, for if evolution could produce all the animals in the world, why not man?

It is a mistaken policy for the clergy to succumb to their antagonists at the present time, when the discoveries of science are more than ever opposed to the fatalistic doctrine of Darwinism in every form. The advocates of evolution are constantly driven to make concessions, and its most sanguine supporters do not pretend to say that they can establish it by the inductive process of reasoning. Nevertheless, a writer in the *Nineteenth Century*, so recently as December 1879, has the boldness to say, "The grand scientific hypothesis (evolution) of the century is upon its trial, as the theories of Newton and Galileo were before it!"

I will now proceed to array against the chimera of evolution the phalanx of facts which strike at its very root. In 1875, in the essay to which I previously referred, I adduced some of the facts which show that evolution, which *assumes to be a law*, is absolutely at *variance* with the *recognised laws of nature*. I there stated that no one has succeeded in producing a new genus or a decidedly new species, though it is well known to all breeders of animals—and to every common gardener—that an enormous variety of animals and plants can be produced by careful selection, crossing, &c. Long before Darwin's work on *The Descent of Man* appeared, naturalists had observed the gradations of organisms, on which evolutionists lay so much stress, as well as the similarity of the bodily functions and conformations of animals; but this is nothing more than that *archetypal unity*, which is found throughout all nature.

The barrenness of hybrids is universally acknowledged, and is utterly irreconcilable with the theory of evolution. Can a better reason be given than the one commonly received, that the great Lawgiver has established a *law* to prevent the confusion of species?

In the same essay I stated the fact that the forms and features of men and animals are the same now as they were thousands of years ago, as depicted on the Egyptian monuments, or as still traceable in the mummies of the pyramids, and that the intellect of man has never been developed in a higher degree than it was in the days of the Hebrew prophets and Greek poets. The only answer offered is, that evolution requires not only thousands, but billions upon billions of years for the development of a new species. This is dreaming and not sober reasoning. The palæontologists can read the records of the past, stamped on the crust of the earth, but who can read

the future of a million years to come? The mind of man has not only a limited field of observation, but has also limits to its own power, and it is not a healthy exercise for the mind to indulge overmuch in the pleasures of the imagination.

The periods required for the evolution of one species into another are infinitely longer than the time, as calculated by the physicists, which has elapsed since life first appeared on the face of the earth. It has been estimated that a period not much exceeding one hundred millions of years must have passed since the earth was sufficiently cooled down to support life. An approximate calculation will show that this is not nearly long enough for the imaginary law of evolution to produce all the species, living and extinct, that have been discovered; for the Darwinites are obliged to admit that a time almost fabulous is required for the development of even a single species by evolution.

Sir Charles Lyell estimated the now existing species of vegetables and animals on the terraqueous globe at one and a half millions: this is exclusive of microscopic beings, whose number is incalculable. A single drop of stagnant water, according to Leeuwenhoeck, contains about 500,000,000 of animalcules, a large number of which probably consists of distinct species. Sir Charles Lyell says it is very difficult to form a calculation of the number of extinct species. Each stratum which contains fossils is marked by species which are peculiar to it and to the epoch when they were deposited, and myriads have no doubt been obliterated by the mechanical and chemical forces to which they have been subjected.

It may be roughly calculated, from the observations of various naturalists and geologists, that the number of extinct species, including both animals and vegetables, amounts to not less than 3,000,000. The addition of 1,500,000 of still existing species makes a total of 4,500,000. If we grant for the sake of argument, that one species could be evolved from another in so short a space of time as 5,000 years, and multiply the 4,500,000 species, living and extinct, by 5,000, we shall find the time required to produce all the number of species that have ever appeared is 22,500,000,000.

Difficulties are constantly arising in the path of the evolutionist. Can he inform us whence, or through what channel, the nightingale derives her song? Are the wings of birds derived from the quills of the porcupine? Whence does the beaver obtain his constructive power, the spider learn to spin her geometric web, or the carrier pigeon acquire her wonderful instinct? Are the beauty and scent of flowers, which are the grace and ornament of the earth, due to natural selection?

The habits of different kinds of bees have been quoted in proof of this law of natural selection, showing that the skill of the house-bee has been developed by evolution, step by step, through inferior classes of bees. It is also believed regarding instinct, that it is to be accounted for by hereditary transmission; that each animal is “not individually taught, its personal experience is *nil*, but has the benefit of ancestral experience. In that inherited organisation are registered all the powers which it displays at birth.” In this manner the chick learns “the very complex co-ordination of eye, muscles, and beak” which enable it, on “coming out of the egg, to balance itself correctly, run about, pick up its food” &c. In all cases of this kind the evolutionist holds that the instinctive powers displayed by animals are nothing more than the results of organic memory. The law of hereditary transmission cannot be disputed, but it is carried to a fabulous length when it is asserted that the human brain is a register of “infinitely numerous experiences received during the evolution of that series of organisms through which the human organism has been reached.” But all this ingenious speculation must not be mistaken for sober truth, and when we show, as we hope to do, that the organic chain, which is supposed to support this airy fabric, is destitute, not only of what should have been its strongest link—the ape-man, but is also wanting in many other links, it must be acknowledged that the dream of evolution will pass away like the “baseless fabric of a vision.”

Two years since, having seen no answer to the above difficulties in the way of Darwinism, I repeated them in an article which I published in the *Journal of Psychological Medicine*,* and gave the following additional evidence of its fallacy, from two of the highest authorities in natural history and palæontology. Mr. William Carruthers said, in his address delivered at the opening of the Geologists' Association in November 1875 †:—“The plants portrayed on the ancient paintings and sculptures of Egypt; the fruits placed in coffins with embalmed bodies, and the fruits and seeds found in ancient lake dwellings, all belong to existing species, with which they agree in the most minute and apparently accidental particulars. The existing order of plants *if it be due to genetic evolution supplies no proof of it*. . . . The cellular algæ preceded the vascular cryptogams, or the gymnosperms of the newer palæozoic rocks, and these were speedily followed by monocotyledons, and at a much later period by dicotyledons. But the earliest representatives of those various sections of the vegetable kingdom

* *Modern Pseudo-Philosophy*, vol. iv., part I. New Series.

† By William Carruthers, Esq., F.R.S., F.L.S., F.G.S., &c., Keeper of the Botanical Department of the British Museum.

were not generalised forms, but as highly organised as recent forms, and in many cases more highly organised; and the divisions were as clearly bounded in their essential characters, and as decidedly separated from each other as they are at the present day. . . . Is it possible from the record of organic life preserved in the sedimentary deposits, to discover the method or agent through the action of which the new forms appeared on the globe? The rocks record the existence of the plants and animal forms, but as yet they have disclosed nothing whatever as to *how* these forms originated."

The testimony of Thomas Davidson, Esq., F.R.S., V.P.P.S., &c., derived from the animal kingdom, is equally strong. Mr. Davidson is one of the most distinguished palæontologists of the age, few men having had more honours bestowed on them from both British and foreign scientific bodies. He stands unrivalled in his knowledge of the nature and history of those small sea-shells called brachiopoda, of which there are three thousand species. He is, moreover, the friend of Darwin, and it was at the particular request of that great naturalist that he undertook the task of minutely examining the characteristics of the brachiopods, with a view of proving whether or not they would support the truth of the Darwinian theory. In the *Geological Magazine* for 1877 Mr. Davidson says: "We have no positive evidence of those modifications which the theory invokes, for types appear on the whole to be permanent as long as they continue, and when a genus disappears there is no modification that I can see of any of the forms that continue beyond, as far as the brachiopoda appear to be concerned; and why should a number of genera, such as *lingula*, *discina*, *crania*, and *rhynchonella* have continued to be represented with the same characters, and often with but small modification in shape during the entire sequence of geological strata? Why did they not offer modifications or alter during those incalculable ages? Limiting myself to the brachiopoda, let us see what further they will tell us on this question. Taking the present state of our knowledge as a guide, but admitting at the same time that any day our conclusions and inductions may require to be modified by fresh discoveries, let us ascertain whether they reveal anything to support Darwinian ideas. We find that the larger number of genera made their first appearance during the palæozoic periods, and since they have been decreasing in number to the present period. We will leave out of the question the species, for they vary so little that it is often very difficult to trace really good distinctive characters between them; it is different with the genera, as they are, or should be, founded on much greater and more permanent distinctions. Thus, for example, the family *Spiriferidæ*

includes genera which are all characterised by a calcified spiral lamina for the support of the drachial appendages; and, however varied these may be, they always retain the distinctive characters of the group from their first appearance to their extinction. . . . Now, although certain genera, such as *terebratala*, *rhynchonella*, *crania*, and *discina* have enjoyed a very considerable geological existence there are genera, such as *stringocephalus*, *uncites*, *porambonites*, *koninckina*, and several others, which made their appearance very suddenly and without any warning; after a while they disappeared in a similar abrupt manner, having enjoyed a comparatively short existence. They are all possessed of such marked and distinctive internal characters that we cannot trace between them and associated or synchronous genera any evidence of their being the result of descent with modification." It is thus evident that the eminent brachiopodist, to whom Darwin himself had referred for the confirmation of his theory, has decided against him.

I also drew attention at the same time to the facts, that the fossil trilobite crops up *abruptly*, at the close of the carboniferous epoch, with *the eye perfectly developed*—that no breeding has yet been able to produce, by selection, two species so distinct that they can generate hybrids—and that there is a limit to the variability of species. The scientific objections to the Darwinian hypothesis are innumerable, and its advocates are constantly driven to fresh concessions. It would be well if its supporters would be silent for a while. A fixed law or a general principle gains by investigation, but this has not been the case with Darwinism. Every year some fresh defect is revealed, and it is wonderful that there should still remain any who believe it to be standing on as firm a basis as the law of gravitation. Häckel goes so far as to propose that it should be accepted as the basis of education! and "the protoplasmic soul (*die plastidul-seele*) be assumed as the foundation of all ideas concerning spiritual being!" Can this extravagance be exceeded?

We are indebted to Dr. Bateman for a valuable work, *Darwinism tested by Language*,* in which he proves scientifically, that the faculty of language places an impassable gulf between man and the brute creation. This work was very unpalatable to evolutionists, and Dr. Bucknill, in a review of it, in the first number of *Brain*, not being able to refute this fact, had recourse to the dangerous expedient of attempting to turn his opponent into ridicule, by stating that he was unable to comprehend the "amount of evidence" which "Darwin had collected" in favour

* Rivingtons, London.

of evolution. To us it appears, on the contrary, that Dr. Bucknill himself does not appreciate, or is "not aware of the amount of evidence" on the other side of the question. In my review of *Brain*, in the *Journal of Psychological Medicine*,* I asked him to answer the objections which we have already advanced in the foregoing pages. I will now give a few extra—additional facts, and if they all remain unanswered the inference must be—that they are unanswerable.

It has been asserted that the distinguishing characteristics observed in animals in various countries are due to their environments—to use a newly-coined word. How does it happen then, that in parts of South Africa and Australia, alike in soil and climate, the species are entirely different?

Evolutionists have never informed us which was developed first, the male or the female of animals. A man and woman are very different, and yet one mother produces both. How can this be? Again, how is the balance of the sexes preserved? These are mysteries which the materialist can no more explain than he can the mystery of life.

It is impossible for the evolutionists to explain by insensible gradations or fortuitous changes the origin of the electric battery in the torpedo. Would they presume to say that if Galvani was able to perfect his battery in a few years, the Great Mechanician required billions of years to complete the wonderful weapon of defence with which the torpedo is endowed?

Another point on which great stress has been laid, is the resemblance in appearance between the human embryo, and that of various animals, during its development in utero. But a little consideration will show that the similarity is partial, and is not carried so far as to lead to any doubt as to the existence of that law which prevents the confusion of species; and without which the world would long ago have been filled with legions of monstrosities.

It is affirmed that the human embryo, when in utero, passes through successive forms of organisation analogous to those of a fish, a reptile, a bird, and the inferior mammalia. But if it is fish-like at one period of its growth, how does it not sometimes come to pass that it is developed into a perfect fish. There must be a fundamental difference between the germ of a man and that of a fish from the very beginning, which no microscope has yet been able to detect. Moreover, psychological observations have led to the probable inference that the brain of the human foetus, does not at any time exactly resemble that of any inferior animal. Merely vague resemblances are very imperfect data on which to form a theory.

* *Vide Journal of Psychological Medicine*. New Series, vol. iv., part II.

With reference to the two principles—"the struggle for existence" and "selection in relation to sex"—nothing more need be said here, than that they would be of no avail with regard to those animals that are destitute of the power of locomotion.

We have mentioned facts enough, and more than enough, to prove that the chain of evidence in favour of evolution, which was supposed to be constructed of links of iron, is in truth no better than a rope of sand. Much of its popularity was due to its advocacy by Herbert Spencer, and other Positivists, who no doubt were delighted to find a theory which gave support to their atheistical opinions. It is extraordinary that the illogical lucubrations which Herbert Spencer disseminated under the garb of philosophy should have been received with such admiration, not only by a portion of the public, but also by scientific men, like Dr. Tyndall and Dr. Allen Thomson. The former called him the "Apostle of the Understanding." Does he think that what Herbert Spencer says of life, which he defines as "a continuous adjustment of internal relations to external relations," has won that title for him? Can anything be more indefinite than such a definition? I would ask, has he originated or established any great scientific or moral truth? * Again I repeat that as a writer he is obscure and pedantic, and his style forms a striking contrast to the simplicity and perspicuity of our greatest writers. This is what he says of evolution: "Evolution is a change from indefinite incoherent homogeneity to a definite coherent heterogeneity, through continuous differentiations and integrations." This is little short of nonsense. Can such expressions as these be considered indications of a master mind, and is such a teacher to be looked up to as a guiding star?

One of the evil fruits of evolution is the objection it has raised to the evidences of "design in nature"—a theme which has given rise to the holiest thoughts and called forth the noblest expressions of adoration and praise. We have now to learn that the admirable Bridgewater Treatises, by Sir Charles Bell and others, are mistakes, and that the prosaic process of development effects all that is seen in animated nature, and that we are to shut our eyes to the endless wonders of design, as exhibited by the manner in which the requirements of the species are suited to the circumstances in which they are placed. Are not the wings of the eagle adapted for an elevated

* We must apologise. We had nearly forgotten the great discovery he has recently announced—that it is the duty of man to enjoy himself. This establishes his fame, not only as the "Apostle of the Understanding," but as one of the greatest moralists of the age. Some have illnaturally remarked that it is to Epicurus, and not to Herbert Spencer, we are indebted for this great moral truth.

flight, and the fins of the trout to darting through the water? *

Beauty can have no place in the scheme of the evolutionist, for it is impossible to believe that the lowest grades of animals acquired it by the assumed law of natural selection. One of the greatest of living geniuses (Ruskin) says the Power which gave to "the opal its fire," which "wreathed the swan with snow and bathed the dove with iridescence," would not be subdued under the slow influence of accident and time.† Genius spurns evolution—common sense ridicules it.‡

* To Dr. Andrew Wilson we are indebted for the following striking instance of design: "Even more interesting than the case of the primrose is that of the *myosotis versicolor*, a species of forget-me-not, the arrangement for securing fertilisation of the seed exhibiting a perfect adaptation to all possible exigencies which may arise in the life history of the flower. If we examine the *myosotis* just after the flower has opened, the pistil with its long style is seen to project above the level of the flower itself. It thus presents a most likely object for contact with the proboscis of an insect which has come from another *myosotis* laden with pollen. But failing to obtain fertilisation of its seeds by insect-carried pollen from a neighbour flower, the *myosotis* has yet another resource in the pollen of its own stamens. The stamens at the opening of the flower are placed far below the style, and hence it is impossible, so long as the stamens remain below, for the pollen to be placed on the pistil and thus to fertilise the seeds. But nature has been equal to such an emergency. As time passes, we find the stamens to grow upwards with the petals, and as in time they overtop the pistil, the flower is enabled to fertilise its own seeds. Not less interesting or remarkable are the phases observed in the action of pollen itself, in its work of fertilisation. Left to themselves and unapplied to their special purpose, the little yellow grains of pollen wither and die. But, placed in its appropriate and intended situation on the pistil, each pollen grain, as if guided by some inherent instinct, projects from its surface a tube-like structure, which passes through the style of the pistil, and brings the essential matters of the pollen grain in contact with the seeds."

† From Ruskin's *Love's Meinie*, in a lecture on Greek and English birds. G. Allen & Co., Keston, Kent, 1873.

‡ The following satire appeared originally in an American paper a few years since. I never could learn the name of the paper, or of the writer. It is too good to be lost sight of:—

"*The New Scriptures, according to Tyndall and others.*

"1. Primarily the Unknowable moved upon cosmos and evolved protoplasm.

"2. And protoplasm was inorganic and undifferentiated, containing all things in potential energy; and a spirit of evolution moved upon the fluid mass.

"3. And the Unknowable said, Let atoms attract; and their contact begat light, heat, and electricity.

"4. And the unconditioned differentiated the atoms, each after its kind; and their combinations begat rock, air, and water.

"5. And there went out a spirit of evolution from the Unconditioned, and, working in protoplasm by accretion and absorption, produced the organic cell.

"6. And cell, by nutrition, evolved primordial germ, and germ developed protogene, and protogene begat coozon, and coozon begat monad, and monad begat animalcule.

"7. And animalcule begat ephemera; then began creeping things to multiply on the face of the earth.

"8. And earthy atom in vegetable protoplasm begat the molecule, and thence came all grass and every herb in the earth.

"9. And animalcula in the water evolved fins, tails, claws, and scales; and in the air, wings and beaks; and on the land they sprouted such organs as were necessary as played upon by the environment.

Anyone who visits the Zoological Gardens, in a healthy frame of mind, cannot fail to be struck with the evidences of design as exhibited in the conformation of the various animals, so marvellously adapted to the spheres in which they were born, each one having been so organised as to be fitted to get his own "living, in that state of life in which it had pleased God"—not evolution—to place him.*

Many of those who adopt evolution as a guiding principle have been driven into a complete state of puzzledom. The Rev. J. W. Fowle, in the *Nineteenth Century* for July 1878,

"10. And by accretion and absorption came the radiata and mollusca, and mollusca begat articulata, and articulata begat vertebrata.

"11. Now these are the generations of the higher vertebrata, in the cosmic period that the Unknowable evolved the bipedal mammalia.

"12. And every man of the earth, while he was yet a monkey, and the horse, while he was a hipparion, and the hipparion, before he was an oredon.

"13. Out of the ascidian came the amphibian, and begat the pentadactyle, and the pentadactyle by inheritance and selection produced the hylobate, from which are the simiadae in all their tribes.

"14. And out of the simiadae the lemur prevailed above his fellows and produced the platyrrhine monkey.

"15. And the platyrrhine begat the catarrhine, and the catarrhine monkey begat the anthropoid ape, and the ape begat the longimanous ourang, and the ourang begat the chimpanzee, and the chimpanzee evolved the what-is-it.

"16. And the what-is-it went into the land of Nod and took him a wife of the longimanous gibbons.

"17. And in process of the cosmic period were born unto them and their children the anthropomorphic primordial types.

"18. The homunculus, the prognathus, the troglodyte, the autochthon, the terragen—these are the generations of primeval man.

"19. And primeval man was naked and not ashamed, but lived in quadrumanous innocence, and struggled mightily to harmonise with the environment.

"20. And by inheritance and natural selection did he progress from the stable and homogeneous to the complex and heterogeneous; for the weakest died, and the strongest grew and multiplied.

"21. And man grew a thumb, for that he had need of it, and developed capacities for prey.

"22. For, behold, the swiftest men caught the most animals, and the swiftest animals got away from the most men; wherefore the slow animals were eaten, and the slow men starved to death.

"23. And as types were differentiated, the weaker types continually disappeared.

"24. And the earth was filled with violence, for man strove with man, and tribe with tribe, whereby they killed off the weak and foolish, and secured the survival of the fittest."

* It may be here incidentally noticed that some men of high culture have been saddened by the thought that the progress of modern science has reduced both the earth and man to greater insignificance. Astronomy, by extending our view of the universe, and navigation, by enabling us to steam round the globe in a holiday tour, have, they say, given a familiarity and comparative contempt for the earth and for ourselves. But if astronomy has added *trillions* of miles to our knowledge of the space between us and distant suns, our *idea* of infinite space is not increased any more than when we thought they were only *billions* of miles from us; and our more intimate acquaintance with the geography of the earth does not lower our position, or make us less the lords of the brute creation. The multiplicity of stars need not discomfort us, if Coleridge's idea be true. When asked what could be the use of so many worlds if they were uninhabited, he replied, "To make dirt cheap."

labours hard to find a place in it for conscience! Another poor bewildered writer in the *North American Review* cries aloud for a new religion.

Spiritualists, by a strange anomaly, talk of materialising spirits; and one of their body has lately said that the last step of evolution is to develop the human spirit. The force of evolution can no further go—it is played out.

Antiquity of Man.—The subdued tone of the believers in the fabulous antiquity of man, at the last meeting of the British Association, at Sheffield, was a strong contrast to the boldness and confidence with which Mr. Pengelly, F.R.S., delivered a sensational address on the previous occasion, at Glasgow, to a crowded audience. Mr. Pengelly was one of those who were selected by the Royal Society to examine the contents of the Brixham Cavern. It is therefore to be regretted that, on insufficient evidence, he should have availed himself of the influence of his position to imbue the public mind with the notion that the facts revealed by the exploration of the Brixham Cavern proved the existence of man in Devon during the pre-glacial, or at least inter-glacial period. The chief evidence is derived from the discovery of what he terms flint implements and a stone hammer in the cavern. It is fair that the public should know what has been said on the other side of the question.

Mr. Whitley, Vice-President of the Royal Institution of Cornwall, whose talent, enthusiasm, and geological attainments are not inferior to those of Mr. Pengelly, has made most careful examinations of the Brixham Cavern, and his deductions are diametrically opposed to those of the former gentleman. In several papers which he read before the "Victoria Institute, or Philosophical Society of Great Britain," Mr. Whitley has proved that the supposed flint implements are not of human manufacture, and are nothing more than pieces of rubble flint and fragmentary flakes that had drifted into the cavern, and he adduced good evidence to prove that they had a geological and not an antiquarian origin. He stated that, if a nodule of flint be crushed by a heavy blow, it will shiver into flakes precisely similar to those found in the cavern, and, moreover, that change of temperature will split silicious minerals into flake, resembling the supposed knives and scrapers.

Mr. Whitley, in an exhaustive treatise, entitled, *A Critical Examination of the Flints from Brixham Cavern*,* gives the following summary of his arguments:—

"I have now shown that the so-called 'thirty-six rude flint implements, of indisputable human workmanship,' are, for the

* *A Critical Examination of the Flints from Brixham Cavern.* David Bogue, 3 St. Martin's Place, London. W.C. 1877.

greatest part, small undefinable pieces of rubble flint, mixed with a few imperfect subsoil flakes.

“That the marks of use, or secondary chipping, so strongly asserted to be found on the edges of the flints, and so clearly shown on the woodcut, fig. 410, in *Ancient Stone Implements*, are not to be found on the flint itself.

“That the flint described in *Ancient Stone Implements* as a remarkably symmetrical scraper, and said to be found in the cavern, was not found there but in the soil without and above it.

“That the cast of a very perfect flint knife exhibited among other relics in the cavern, and sold to visitors as a cast of a cavern specimen, is a deception.

“That the portion of a cylindrical pin or rod of ivory, said to be found in the cave, was not found by the committee of exploration, is not now with the flints in the museum, and that there is no evidence to show that it is a cavern specimen.

“That the ‘charcoal bed’ contains no charcoal. That slate has been mistaken for flint, and flint for bone; and that the description given of the ‘whole hind-leg of a cave bear,’ the most famous specimen of the cavern, has been found to be so loaded with erroneous facts and false conclusions, that its evidence has been withdrawn and abandoned.”

With regard to the so-called stone hammer, Mr. Prestwich is of opinion that it is a Budleigh-Salterton pebble; and Mr. Whitley observes that it was imbedded in drifted gravel similar to that of the neighbouring raised beaches. He contends that it was introduced into the cavern by natural causes, and that the indentations on its surface, which have been regarded as signs of its having been used as a hammer, are due to its having been “battered by a thousand storms.”

Southall, the eminent American geologist, in his work on the *Recent Origin of Man** gives it as his opinion that the earliest inhabitants of western Europe were intelligent savages, like the Esquimaux Indians, and that neither archæology nor geology have detected any earlier form of man. We may therefore hesitate to believe that the aborigines of Devon were no better than beasts, who herded with wild animals in dens and caves. He mentions a curious fact, which shows how cautious observers who have pet theories should be not to jump to hasty conclusions. A skull said to have been found in a cave was pronounced by Huxley to be a most brutal human skull. It was afterwards discovered, on careful examination, to be an average skull. Moreover, it was not associated with extinct animals, and was discovered under five feet of mud! In

* *Recent Origin of Man*. Philadelphia. 1875. Trübner & Co., London.

the face of these facts, the *Illustrated London News* for August 25 last, in the report of Mr. Pengelly's paper, confidently assures us that the "discovery and systematic exploration of a comparatively small virgin cavern on Windmill Hill, at Brixham (in 1858), led to a sudden and complete revolution, for it was seen that, whatever were the facts elsewhere, there had undoubtedly been found at Brixham flint implements, commingled with remains of the mammoth and its companions, and in such a way as to render it impossible to doubt that man occupied Devonshire before the extinction of the mammoth."

With all the evidence to the contrary, it seems certain, in spite of all Mr. Pengelly says, that this Orson—this wild man of the caves—this grovelling monster—never inhabited the caverns of Devon; and we have yet to learn that any other part of the world had the honour of being his birthplace.

Physiological Psychology.—This pseudo-science, which was ushered in with such loud and triumphant acclamations, and was supposed by its enthusiastic supporters to solve the mystery of mind—this *ignis fatuus* which, if true, would destroy the independence of the mind and the freedom of the human will—has at length proved to be nothing more than a wild and visionary speculation.

Physiological psychology is the most subtle and dangerous form of scientific atheism, because the knowledge required to confute it is confined to a limited number of inquirers. Its doctrines are permeating all classes of society, and are most conspicuous among the younger members of the medical profession; which is to be expected when so many of the influential teachers, holding high rank in our medical schools, have unhesitatingly and recklessly done their utmost to imbue the minds of the rising generation of students with the notion that all our time-honoured creeds are the assumptions of credulity and folly. The students are taught to look down upon them with contempt, and to substitute speculative opinions, which cannot be of the slightest practical value, but must inevitably, sooner or later, make shipwreck of the highest hopes and noblest aspirations of our nature.

I stated five years ago in the *Journal of Psychological Medicine*, and again in an address on the *Materialistic Physiology*, which I delivered before the Victoria Institute, in 1877, that the terms Mental Physiology and Physiological Psychology were illegal and anomalous, as they jumbled together mind and matter, and I proposed to substitute the term *Materialistic Physiology*.* I also stated that the chief dogma

* Subsequently published in *The Journal of Psychological Medicine*. Vol. iii., part I.

of the new school is that mind and all its faculties—perception, memory, will, reason, imagination, as well as all moral attributes—are the result of bodily functions, as if they were secretions from the brain, like those of the liver or kidneys. They have various unintelligible modes of describing the phenomena of the mind. Its operations are spoken of by some as the product of the caudate cells of the brain—by others as a disturbance of the equilibrium of the nervous power—as expressions of material changes in the brain—as cerebral vibration—an emanation from the body, &c.* It seems strange that any one can believe, or expect others to believe, that assertions like these, unverified by careful scientific inductions, can be substituted for what is commonly understood by the word “mind.” Mind is a fact; its existence is proved by our own consciousness, and its operations are indelibly inscribed on the literature and art of ages. It would be as absurd to doubt it as to doubt that of a God, although we cannot explain the nature of either. That it is connected in a mysterious manner with our organisation no one can disbelieve, but we defy the modern physiologists to explain the connection. They speak as confidently of their speculative opinions as if they were acknowledged facts, and as if recent researches had thrown a flood of light on the functions of the brain and spinal cord. I again challenge them, as I have done before, to show that any one really great fact has been elicited since the discoveries of Sir Charles Bell and Marshall Hall. The nerve-fibres of sensation and motion have been traced a little further towards the circumference of the brain, but we are as ignorant as ever of the properties of the caudate nerve-cells of the cerebral convolutions; we can only surmise that it is through them that sensations are perceived and volition exercised.

The chief arguments which have been brought forward in favour of materialistic physiology may be summed up as follows:—

First. That the doctrine of a correlation of force proves that vital, and even mental energy, are interchangeable with physical force.

Secondly. That the phenomena of insanity give weight to the theory of physiological psychology.

Thirdly. That memory is merely a register of impressions on the brain cells.

* The English language itself is getting corrupted by the new philosophical nomenclature that has been adopted in the endeavour to make the new theories intelligible. They will soon require to publish a glossary of the new terms which are accumulating fast. For instance, they call poetic emotion the thrill of a ganglion; thought, cerebration; life, molecular force; creation, evolution; the Deity a primordial germ; crime, cerebral disease; &c.

Fourthly. That there is a function of the brain, termed unconscious cerebration, by which it is understood that the brain can think without individual consciousness.

Fifthly. That the experiments of Fritsch, Hitzig, Ferrier, &c., have gone far to prove that mental faculties can be localised in the brain.

Although the last of the points which we have enumerated, we will take first into consideration the recent electrical experiments on the brain, especially as they just now occupy so much attention both at home and abroad, particularly among the members of the medical profession.

One of the most prominent teachers of this mode of investigation, in this country, is Dr. Ferrier; my observations will therefore be chiefly directed to his experiments and deductions.

With an incomprehensible alacrity, the medical journals in England, with scarcely an exception, vied with each other in extolling Dr. Ferrier to the skies; they seemed to think that he had discovered a royal road to a thorough knowledge of the nature of the human mind—it was nothing more, after all, than a mass of cerebral functions. They did not stop to consider that the inevitable consequence of that belief must be, that mind and brain would both perish together. A pleasant prospect, if true!

In my address before the Victoria Institute in 1877 I remarked that physiological psychology was the revival of the exploded system of phrenology, under a new name. Its object is to materialise mind, by giving a local habitation to each of the moral and intellectual faculties in different parts of the brain. The scheme is an old one, and has been defeated over and over again; nevertheless, as time goes on, it is revived in some fresh shape, either by those who think, by the adaptation of a new phraseology to an old idea, they can gain reputation and fame, or by well-meaning but too enthusiastic men, whose imaginations are unfortunately stronger than their reason; men who, however distinguished in some special department of natural science, are evidently incapacitated by their mental constitution from clearly comprehending the fundamental truths of psychology.

It is the confident boast of this psycho-physiological school that the physiological method is the only means of arriving at a right interpretation of mental phenomena; that it is by experiments on the brain, combined with a careful study of the functions of the nervous system, that it will be ultimately proved that mind is only a function of the brain, and that all the great metaphysical truths which have been believed and taught for thousands of years are to be regarded as idle tales.

Dr. Ferrier has published two works* in which he gave an account of his observations and experiments. I reviewed them both, one in October 1877 and the other in April 1879,† and combated his deductions from them, especially with reference to the localisation of *mental* faculties in the brain.

As the experiments which Dr. Ferrier, Fritsch, Hitzig, and others conducted were performed on the brains of monkeys, cats, dogs, jackals, rabbits, pigeons, frogs, and fish, we would remark, in the first place, that we cannot conceive, even if they had been less conflicting, how they would throw any light on the nature of the moral or intellectual faculties of man.

It so happens that Brown-Sequard and Eugène Dupuy (of New York) cerebral physiologists holding the highest rank, and most careful experimenters, have come to conclusions diametrically opposed to the above authorities. Five years since I remarked in the *Journal of Psychological Medicine* that "many of the so-called discoveries of the most painstaking cerebral physiologists are at variance with each other. It had been for a long time believed that the optic thalami were closely connected with the upper extremities as motor centres, but experiments by Northangel had completely dislocated our ideas on the point, for he found that, after destroying the whole of the optic thalami, rabbits were able to leap about. These facts show that physiologists should pause before asserting that the highest mental manifestations are only emanations from particular portions of the brain, when they have not yet been able to satisfactorily determine the centres of motion and sensation."

Dr. Ferrier's experiments consisted, first in ploughing up (as he expresses it) parts of the brain by a wire cautery; secondly, in wholesale slicing away large portions of the cerebral substance; and thirdly, in electrifying particular spots of the brain. It is more than probable that the two first of these experiments must have caused so severe a shock to the nervous system as to interfere materially with the results. It is not to be wondered at that a monkey's appetite should have been impaired after the whole of the occipital lobes of his brain had been removed. It is more reasonable to suppose that it was the shock of the operation which caused the lessened appetite rather than the injury to an imaginary seat of hunger, as Dr. Ferrier suggested. Neither can we place much reliance on the class of experiments which have reference to electrifying particular spots in the brain supposed to be the seats of sensation and motion.

* The first, *The Functions of the Brain*, was published in 1876. The second, *The Localisation of Cerebral Disease*, in 1878.

† *Vide The Journal of Psychological Medicine*, vol. iii., part II., and vol. v., part I.

Even granting that the electrical current had been directed with extreme precision to the required spot, what is to prevent the current from becoming diffused through the brain and the blood in its capillaries, as water, a good conductor, enters so largely into the composition of both? If this should occur it would be impossible to determine what set of muscles would or would not be affected by the experiment. There is also another influence which must be taken into consideration—reflex action—which is likely to interfere with the accuracy of the electrical experiments.

The fact must not be lost sight of that the convolutions of the brain are a homogeneous sort of mass, and that one convolution resembles another, as to microscopical appearances and chemical elements, as much as one portion of the liver does another, and it would be as reasonable to map out the latter into separate divisions, when there are no visible lines of demarcation, as the former. The brain must therefore be considered to act as a whole.

As Dr. Ferrier is evidently unable to determine precisely the centres of the mere bodily functions of sensation and motion, all that he has said in his chapter on *The Hemispheres considered Psychologically** is so much waste paper.

With the unphilosophic haste so conspicuous in the materialistic school, it was most confidently asserted that the faculty of speech was located in the third frontal convolution of the left hemisphere of the brain, but this opinion has been proved to be incorrect by pathological facts. This localisation of the faculty of speech (Broca's theory) was the only ground which appeared to give any support to the materialists in their untiring efforts to destroy the independence of the human mind. Although this has been utterly swept away, as we shall presently show, they still cling with desperate energy to their forlorn hope.

Many cases are on record in which Broca's convolution and the island of Reil have been diseased or injured without loss of the faculty of speech. On the other hand, aphasia has been present when disease has been confined to the right side. To explain this contradictory evidence Broca suggests a most fanciful theory—that the faculty of speech is in some way connected with the use of the right side of the body and the left side of the brain.

One of the most striking instances adverse to the theory of a left-sided faculty of speech is the celebrated American crow-bar case, in which a tamping iron an inch and quarter in diameter was driven completely through the head of a workman

* In his work on *The Functions of the Brain*.

by a sudden explosion of gunpowder. It was proved by careful measurement that it must have destroyed not only the left Sylvian artery, which supplies Broca's convolution, but also nearly the whole of the island of Reil. This extensive injury was not followed by any impairment of the faculty of speech.

A somewhat analogous case occurred in the practice of the late Mr. Lanyon, of Camborne, many years since. I had the particulars from himself, and he was a man of remarkable intelligence and undoubted veracity. A miner, whilst engaged in blasting a rock, was, by a sudden explosion, struck by a tamping iron, which entered at his forehead and came out at the back of his head, completely transfixing the brain. Incredible as it may appear, the man, immediately after the accident, walked to Mr. Lanyon's house, and in his presence tried to pull out the iron himself. This case was related to me long before the subject of aphasia was broached, or I should have made particular inquiries as to the man's mental condition, and as to which side the iron entered. As it is probable that the man was able to give an account of the accident, he could not have been aphasic; it is also more than likely that such an extensive lesion must have injured Broca's convolution.

For the future there will be no necessity for the advocates of Broca's theory to shift about from left to right, as the question has been set to rest by a crucial test. M. Bouillaud offered a prize of five hundred francs for any well-authenticated case in which the two anterior lobes were destroyed without speech being affected. This was claimed by M. Velpeau,* who had a patient under his care in whom a prominent symptom was *intolerable loquacity*. After death, it was found that a cancerous tumour had taken the place of the *two* anterior lobes.

Another case is recorded by M. Peter, of a man, who, after rallying from the first effects of a fracture of the skull, became extremely talkative. After death, it was discovered that the two anterior lobes were reduced to a pulp.

In 1877 I published† a case which occurred at St. Mary's Hospital, in which speech and memory continued after extensive softening of both anterior lobes of the brain.

Maragliano, one of the most strenuous advocates for experiments on the brain, only ventures to say modestly, that he thinks they will have a *tendency* towards the discovery of some general truth. Professor Pansch, of Keil, moreover, one of the late writers on the subject, is entirely opposed to division of the

* *Vide Gazette des Hopitaux* from April 6 to June 8, 1865, for the discussions on this case. It is remarkable that Dr. Ferrier never referred to this case in his work on *The Functions of the Brain*.

† *Vide Journal of Psychological Medicine*, vol. iv., part I.

brain into lobes, and proposes that it should be divided into principal convolutions, and these again into smaller sulci, and gyri.

Notwithstanding all the irrepressible facts we have just mentioned, Dr. Ferrier has published his materialistic and factless fancies in an article in the *Princeton Gazette** for July 1879, entitled *The Organ of Mind*, and there he makes the astounding and positive assertion, that it is "the brain that thinks . . . in connection with the whole sensory and nervous apparatus!" This is a *petitio principii* fallacy—the bane of modern science.

One of the miserable consequences of physiological psychology is, that having no sound fundamental principles for its basis, it involves its disciples in inextricable confusion of ideas, and entanglement of words. This is still further illustrated by the following remark of Dr. Ferrier's in the same article: "Mental phenomena are the subjective aspect of the functions of sensory and motor substrata, and that, in the last analysis, mental phenomena, however complex, should be reducible to correlation with the activity of certain simple motor and sensory elements, their accompaniments and combinations." In the vain attempt to cross the chasm which separates mind from matter, Dr. Ferrier became giddy in his flight, and has fallen down hopelessly crippled and confounded.

Unfortunately, the propagandism of physiological psychology does not end with Dr. Ferrier. In the *Nineteenth Century* for December 1879 Dr. Althaus, in speaking of the localisation of the faculty of intelligent language in the third left frontal convolution of the brain and its immediate neighbourhood, says: "This discovery was foreshadowed by Gall but *actually made* by Broca"! One of the proofs of the truth of this discovery is, that when "electricity is applied to this part in the brain of the living monkey or rabbit the animal opens its mouth, and alternately obtrudes and retracts its tongue," in its efforts, we presume, to say, Don't.

Dr. Andrew Wilson, in an article on *The Old Phrenology and the New*, in the *Gentleman's Magazine* for January 1879, says: "Our 'New Phenology'—for the word is perfectly explicit as denoting a science of *mind* or brain—is gradually being built up from sure data and *accurate experimentation*."

Another publication, *Mind*, established a few years since,

* We have no fear that the Americans, who are a clear-headed and practical people, should take Dr. Ferrier's assertions for facts. We are convinced of this by an admirable *jeu d'esprit* which appeared not long since in an American paper. It described with an ingenious air of truth and scientific minuteness a wonderful instrument called a *crebroscope*, by which the learned inventor could see the thoughts and sentiments as they arose in the brain. The account of the invention was copied into *The Journal of Psychological Medicine*, vol. v., part II.

has been doing its utmost to propagate the baneful doctrines of physiological psychology and positivism; but fortunately, owing to the dreary dulness of its articles, it is not likely to become popular. In the number for April 1879, there is a paper by Mr. Stavelly Hall on the oft-told but ever-interesting story of Laura Bridgman, from which he flatters himself that he can gather facts in support of the views of his school. He has been unfortunate in his selection of this case. Blind, deaf, and dumb as she was from infancy, she learnt to communicate with the outer world by the means of the sense of touch alone, and it was observed that when dreaming, or thinking earnestly, her fingers moved like the lips of a person in deep thought. This shows the independent working of the human mind.

In the course of his disquisition, Mr. Stavelly Hall makes the following incomprehensible remarks:—"Dreaming and waking notions are related as *species* and *genera*"; and he says of the sleeping state, "Inner work has brought *cells* [of the brain] into unstable equilibrium, and excitability very easily becomes excitation. Where the work of repair is not done, the slight stimuli of the sleeping state is not sufficient to rouse them; where it is done, the almost *spontaneous activity of rested cells* easily raises *their processes above the threshold of consciousness*." This is the sort of nonsense that is talked nowadays in the name of science and philosophy.

The *Edinburgh Review* for January 1879, in an article on *Mental Physiology*, has endorsed some of the boldest and most extravagant views of the materialistic physiologists. The writer, in referring to the recent experiments of Hitzig, Fritsch, Ferrier, and others, of trying to determine by electricity the centres of motion in the brain, observes: "There can be no doubt that in these experiments *ideas* were excited in the brains of the *insensible* animals by the physical agency of electrical currents. The brain-convolutions in reality consist of a number of distinct *mind-centres*, spread out in a kind of vault over the subordinate centres of nerve-action, which have the charge of consciousness, and are arranged layer above layer." What a boon this will be to a poor author, who has to cater weekly for the gratification of the public, to find that when his ideas are exhausted he can command a fresh supply by passing electric currents through his brain! He goes so far as to say that the sensory ganglia take *cognisance* of sensuous impressions and also of mental states, thus endowing brain cells with the mental faculty of cognisance. He also says that the *brain substance* itself accomplishes the task of transmuting the impressions of sense *into ideas*. The term *idea* has always been regarded as synonymous with thought or conception; they are

among the highest manifestations of the mind, and as yet it has been found impossible to account for them by any physical laws. Further, he draws the following conclusions from what he considers the recent progress in scientific discovery: that, "with every expression of a *mental* state, and with every action of the *mind*, some structural change occurs in the substance of the brain."

We must protest against the acceptance of this hypothesis as an absolute truth. Had the question at stake been less momentous than that of the immateriality of the mind its dissemination might have been of little consequence; but when the issue is so tremendous, it is right that the general public, for whom the editor of the *Edinburgh* writes, and who cannot be expected to be familiar with the principles of a recondite and intricate science, should be cautioned against accepting mere speculations as verified facts.

A brief consideration of the writer's conclusion will be sufficient to show that it is another striking example of the *petitio principii* fallacy. Neither the writer nor anyone else has demonstrated that with every act of the intellect some structural change occurs in the substance of the brain; that mind-action is the result of chemical decomposition of brain-pulp, or that the transmission of mind-force between the several globules of the brain is effected in the same manner. The brain is confined in a bony case which renders it impossible to watch its vital operations through the microscope. We must wait until the "cerebroscope" is realised before the physiologists can be in a position to speak positively on the point.

Dr. Allman in his address, at the meeting of the British Association at Sheffield, made a similar psychological blunder as the critic in the *Edinburgh Review*. He said when a thought passed through the mind it is associated, as we have now abundant reason for believing, with some change in the protoplasm of the cerebral cells. The *fact* is that we are not yet in possession of data to substantiate such an assertion, and it is of the utmost importance that a hasty opinion should not be formed on a question so closely associated with the independence of the human mind. This bold assertion, which has been accepted by many as an established truth, is the keynote of those who style themselves physiological psychologists, and whose endeavour it is to materialise mental phenomena, and identify mind with matter. In our waking moments it has never been demonstrated that a thought effects any change in the protoplasm of ganglionic cells of the brain; how utterly inconceivable it is then, that a subtle intangible

thought, such as flits across the mind in a dream, should produce the slightest molecular alteration, especially at the very time when the nervous system is recuperating itself by rest, and is supposed to be least susceptible to impressions!

The doctrine of a correlation of force gives no support to physiological psychology: Grove's doctrine is applied most loosely. There is no evidence to show, as many assert, that mental, vital, and physical forces are identical. There is strong ground for believing that Grove's doctrine of the correlation of force applies to heat, electricity, chemical affinity, and motion; but there is no proof that it can be extended to mental or vital phenomena. Before a correlation of forces can be admitted, it is necessary, according to Mr. Justice Grove's explanation, to prove a mutual convertibility—a see-saw sort of action. Thus heat may mediate or immediately produce electricity, electricity may produce heat. With a total disregard of this clear statement, modern writers speak of the correlation (forgetting to add the word "force") of leaves and roots, of mental and nerve force, of vital and physical force, &c. If we apply the test of Grove's theory to the consideration of vital phenomena, we shall not find that a single instance has been recorded in which vital and physical force have been found interchangeable.

In the present day it is the practice of many scientific writers to use the terms correlation, evolution, and potentiality, to account for things that they cannot explain. They are used in a sort of hocus-pocus fashion. For instance, if it is asked, How did man originate?—the ready answer is, By evolution. What is life?—The potentiality of atoms. What is mind?—A correlation of magnetic and psychic forces.

The phenomena of insanity have been referred to on insufficient grounds by materialistic physiologists in proof of their theory. They refer to those particular cases of mental derangement in which marked signs of brain disease have been discovered after death. They also regard the beneficial effects which often result from physical remedies, as confirming this view. That bodily disorders will affect the mind is unquestioned, but the converse is equally true, that mental causes will produce derangement of the bodily organs; and the physiological psychologists are asked to explain how it happens that in many cases of acute mania, ending rapidly in death, a *post-mortem* examination cannot detect any change in the substance of the brain. The decided influence of the mind on the body is, however, patent to the most superficial observer. Is there any cordial like hope to the poor sufferer prostrated by nervous depression from domestic or other mental anxiety? Or, will not some moral shock, such as the sudden announcement of

misfortune or bereavement, shattering all hope of worldly prosperity or home happiness, convert a healthy man into a raving lunatic?

All those who have resided much with the insane can bear witness to the intelligence and accomplishments frequently observed in patients suffering from incurable brain disease, and to the lighting up of the mind during the last moments of life. One case especially occurs to me, that of an old lady who was formerly under my care. She had passed the greater part of her life in an asylum, and during that period had never been for a moment coherent, yet just before her dissolution she spoke quite sensibly.

It is a well-known fact that in uncomplicated cases of acute mania, where death ensues rapidly from exhaustion, a *post-mortem* examination detects no change in the *substance* of the brain, although the membrane may be congested, a common occurrence not peculiar to insanity. Again, in cases of *mania transitoria*, how is it possible to associate the delirium, which lasts only a few hours, with lesion of the brain?

The phenomena of dreaming, which closely resembles some forms of insanity, may be noticed here. The analogy between the phantasms of the one and the hallucinations of the other is very remarkable, and the rival schools of the subjectivists and objectivists both claim these phenomena as evidence of the truth of their respective theories. To us it appears that the balance of the arguments are on the side of the subjective view, for what can be less material than "the stuff that dreams are made of"? In dreams, when the mind is uninfluenced by external impressions, it is left to wander fancy free among the images and memories of the past. Consciousness and memory are not lost, and the emotions and imagination are in full force.

The most obscure problem connected with sleep and dreaming, and the one respecting which there are such conflicting opinions, is that which relates to the state of the mind in what is called dreamless sleep. Some assert that at such times the mind is a perfect blank; others, as it appears to me, with more probability, that the profoundest sleep is not unattended with dreams, though sometimes they are as utterly forgotten as if they had never occurred.

With a view of throwing light upon the question of the subjectivity of dreams, and of ascertaining whether the images which occur in sleep are viewed by the "mind's eye," after long deprivation of sight, or are merely automatic excitations of a sense surface, I sought the experience of Dr. W. A. F. Browne, of Dumfries, who has been blind for seven years. No living psychologist is more competent to give an opinion on

this abstruse subject. He kindly sent me the following analysis of his mental state during sleep, with permission to publish it. He observes: "I have been blind for seven years, and being of a nervous active temperament, there has been a continuous stream of thought presented to consciousness. These thoughts have consisted mainly, but not exclusively, in the reproduction of former impressions. First, I have never experienced recollections of taste, smell, rarely of touch; frequently of hearing, and necessarily of vision. These impressions refer in great measure to past time, and to the earlier portions of my life; but a vast portion do not. I have long since rejected the photographic hypothesis. Secondly, because the mental conditions are entirely new to myself; they are discoveries, creations. Thirdly, where this is not the case, and these conditions are combinations of familiar and unknown scenes or impressions, it is obvious that the act of uniting them into a congruous whole cannot be the effect of volition or any conscious mental operation, and is utterly inconsistent with any photographic manipulation, or the fortuitous union of a hundred photographs. Fourthly, independently altogether of visual impressions, emotions and sentiments are experienced during sleep, such as fear or hope, which may or may not be the natural results of the existing mental state, and which cannot, in any sense, be of photographic origin. Fifthly, it is worthy of note that, however distant the period at which the impressions may have been received, say in early childhood, it is invariably the present Ego which sees it, hears it, and is identified with it."

The new phrenologists having settled, to their own satisfaction, that each faculty of the mind has a special seat of its own in which to carry on its operations, it only remained to explain its *modus operandi*. Each centre is supposed to be under the control of a number of brain-cells—a sort of limited liability company of molecules—which alone is responsible for any evil thoughts it may engender. This little hypothesis only requires us to assume, in the first place, that each cell is endowed with mental attributes. This resembles the theory of Leibnitz—that monads had perceptions and appetites.

It has never been proved that the cells of the brain are exempt from that law of constant renewal which generally obtains in the soft tissues of the body. The probability is, from its delicate texture, that it is constantly in need of renovation. Its fragility is conspicuous after death, for it is a fact familiar to every student of anatomy, that it is one of the very first parts of the body that decomposes. If, then, the brain be of such a perishable nature, it is incredible that images or ideas impressed by any merely physical process on the cells of the brain could be vividly recalled after a long

period of time, when the matter of the very cells which were supposed to have received them had been replaced by new matter.

The last subject of physiological psychology we propose to notice is that of unconscious cerebration; it need not detain us long. The supposed function of the brain was announced as a new discovery by Dr. Carpenter. It assumed that the human brain is capable of carrying on trains of reasoning, of drawing conclusions and forming *conscious* ideas without *consciousness*; in fact, that the higher faculties of the mind can be exercised independently of the mind itself! If this were true, it would reduce all human beings to mere automata; a very pleasant creed for those who dislike mental labour, as it is supposed to do a great deal of our thinking without any trouble to ourselves, like the working of a steam engine.

Another incomprehensible notion allied to unconscious cerebration, is, what the advanced physiologists have named *ideo-motor* actions, involuntarily performed under the direction of ideas. As, therefore, the former relieves us from all responsibility as to our thoughts, so the latter exonerates us from all the blame of evil actions. Very comfortable doctrines these for those who desire to follow the bent of vicious inclinations without let or hindrance. The chief facts which gave rise to these theories are those connected with walking, and with the rapid movements of an accomplished musician's hands; and the singular manner in which a person recalls to his memory a word or thought that seemed utterly forgotten. As regards the first, it is probable that when a command over any particular set of muscles has been obtained, the amount of attention given to the direction of the movements is so small, and the recognition of it so faint, as to escape the memory. The second instance may be accounted for by the laws of mental association.

A strong indication that physiological psychology has broken down, is evinced by the circumstance that Dr. Hughlings-Jackson, one of its leading authorities and most strenuous supporters, is at length compelled to admit that metaphysics and physics are distinct branches of science, and must be kept apart. He writes in the *Medical Press* for September 3, 1879: "In a scientific investigation of nervous diseases, it is essential to keep distinct psychology and the anatomy and physiology of the nervous system. . . . I have been misled by not having seen the distinctness of physical (nervous) states and psychical states,* in my earlier studies, and thus I feel bold to point out the evil

* Another puzzled materialist, writing in the *British Medical Journal* for November 8, 1879, flatters himself that he can get out of the difficulty by substituting the term psychological physiology for physiological psychology. "Strange such difference should be 'twixt tweedledum and tweedledee."

results of the *confusion of the two things*." Dr. Hughlings-Jackson must not think that he has acted with extraordinary boldness in making these remarks. He has not been the first to mount the breach. I pointed out the fallacies of physiological psychology in an article on *Materialistic Physiology* in vol. iii., new series, of the *Journal of Psychological Medicine*.

The modern cerebral physiologists have been guilty of a serious and culpable error in their attempt to explain mental phenomena by a hasty generalisation from the very few facts that are known respecting the nature and properties of the ganglionic cells so extensively diffused throughout the cortical substance of the brain. The mind is an entity—a first principle—and it is as unphilosophical as it is inconceivable that matter should think.

Their hasty and illogical conclusions would have mattered comparatively but little, if the question at issue had reference only to physical science; but when their haphazard speculations tend to shake a belief in the independence of the human mind—a belief that has been upheld by the greatest philosophers both of ancient and modern times—they might surely have hesitated before enunciating doctrines which, if true, would make man an irresponsible agent and sap the foundations of morality and religion.

From all the facts that have been adduced, it must be patent to every unprejudiced inquirer that physical force cannot account for life; that neither bathybius nor spontaneous generation can explain the origin of bioplasm; that our first parents were not grovelling savages; that evolution is not the First Cause; that physiological psychology has not solved the mystery of the human mind; and that, when tested by the irrepressible, inextinguishable, irresistible, inexorable logic of facts, the pseudo philosophy of scientific atheism collapses—ignominiously collapses.—Q.E.D.

ART. II.—MAD ARTISTS.

AN opinion has been prevalent that art is more conservative of the stability and integrity of the human mind than are poetry or light literature. This speculation, for it has never been submitted to analysis or demonstration, has probably arisen from the knowledge that the senses and perceptive faculties are more involved than the sentiments, or imagination, in painting. Certain it is that, while eccentricity appears to have been equally shared by those who possess "the poet's eye and painter's hand," there are fewer notorious examples of alienation among the distinguished wielders of the brush than of the pen. It must be borne in mind, however, that the errors, incoherencies, extravagances, and puerilities of the writers of verse are more conspicuous, flagrant, and symptomatic of aberration than are the quips and cranks and wanton wiles or impotent touches of the painter. Another qualification must not be omitted, as every educated or cultivated individual is now either initiated in one or other of the departments of art, or at some period of his life attempts to imitate in some way external and beautiful forms, while to few are granted such fancy or inventive genius as can clothe even commonplace thoughts in clumsy rhyme, or find reputation in the corner of a provincial newspaper. While, then, it may be conceded that *poeta nascitur, non fit*, that these God-gifted are few and far between, that every individual makes himself, or conceives that he makes himself, a Raphael or a Canova, or that the sum of these aspirants is legion; and while it would be vain to dispute as to the proportion of these classes upon which the blight of mental disease falls, it may be easily shown that of those who have received instruction in drawing, painting, &c. many become of unsound mind but continue to exercise their acquired powers contemporaneously with the most advanced and appalling forms of disease. There are before me three gigantic volumes containing specimens of the *pseudo* art of lunatics in different forms and phases of derangement. This collection was formed by the medical superintendent of an asylum which received patients almost exclusively belonging to the educated classes. These attempts were made in pencil, ink, water colours, chalk, sepia, and oil during a period of twenty years. The first volume is confined to portraits in pencil of fifty-five inmates of the asylum, which are described as having been in many cases striking likenesses, and which, at all events, convey the impression of characteristic

displays of power or weakness, sentiment or sensuality. We are not, however, left to conjecture the prevailing mental constitution of the individual depicted, as the species of alienation, diagnosed by the attendant physician, has been appended to each. The aspects of disease presented include monomania, with delusions; ecstatic mania, theomania, dementia, &c., and were any scientific object to be gained by such an addition, the whole narrative of the case, from its beginning to its close, might be accessible, and in this respect surpassing the illustrations of mental diseases published many years ago by Sir A. Morison, as the result of his observations on physiognomy in Bethlelem. The author of these sketches had been originally an engraver. In the second volume are found one hundred and twenty-four sketches, embracing every possible object except the physiognomy of the patients around. They were the work of persons labouring under erotomania, dipsomania, furious mania, manias of suspicion, fear, vanity, and almost every known form of mental disease except fatuity. The authors were, with two exceptions, unprofessional artists, but have, apparently from their productions, received instruction in the development of some degree of innate taste. The drawings, which are naturally of various degrees of merit, consist in a few instances of landscapes from nature but chiefly of copies from engravings or paintings of scenes and subjects supplied by memory, or of creations of a disturbed imagination. Placing out of consideration the marvellous degree of beauty, accuracy, and delicacy in the execution, it is worthy of special note that it is only when the creative or imitative power is guided by fancy or passion that the design or the expression becomes altogether wild, absurd, or hideous. It may be observed further, that the latter class, in which the elements of the picture are either grotesque or degrading or unintelligible, have all to be referred to individuals animated by gross and debasing tendencies—in other words, labouring under sub-acute mania, of which appetite was the chief characteristic. In three of the productions, representing spots and transactions in the Highlands, and imbued with the most brilliant and blazing colours, the story told is merely stupid and Quixotic. In two others the confusion resembles the chimeras of nightmare. In one only of the whole series is there any approach to obscenity. Of the artists of this condemned department, two had been taught—one very imperfectly, one in an admirable and successful school—the third was a man of lofty genius and varied acquirements, but was altogether untrained; of the three none have, so far as we know, recovered. Among these melancholy records of art in madness, as the volumes have been entitled, are a number of bold, graphic, magnified delineations in chalk

of small plates in Esquirol, Morison &c., thrown off from night to night in order to become the illustrations of lectures on alienation the following day. The chief interest hinges upon the fact that the painter was himself a maniac, knew the nature of the subjects with which he was dealing, the purpose for which they were coveted, and caught the very attitude, feature, and expression which was desired. With this exception, and those previously enumerated, there cannot be detected in this large collection a trace or allusion or revelation of the place or circumstances under which the work was undertaken, or of the mental or moral lesion under which the workmen suffered. To the third volume there are only five contributors. One of these is a discharged patient, who sends exquisite glimpses of his Canadian home; a second, who, in lucid intervals between paroxysms of mania, executes several landscapes; the third, evidently a practised adept, presents several beautiful vignettes of flowers on pieces of cardboard; a fourth adds several highly coloured sketches of the seaboard; and the fifth, the most interesting of the whole, traces, from its zenith, the decline and fall of his genius. His first picture is that of an ancient cathedral in pen and ink, so minutely drawn that the very stones, their sizes, number, and junction can be followed, but so delicately and exquisitely finished that, in place of a mere architectural plan, you have before you a splendid, solemn, mediæval pile. The second is the view of a castle, a river, a village, and all the sweet accompaniments of a spot remote from public view. Passing over a series belonging to the same gallery, differing, however, in attractiveness, we arrive at a positive deterioration, where the artist illustrates his letters to his betrothed by means of mere morsels of landscape, suggestive, but misplaced and inappropriate. Very speedily these pictorial epistles betray bad spelling, the omission of words, syllables, and letters. The ardent communications to the lady give place to mere scratchy outlines, and, subsequently, as if there was an inability to complete any lines but those in the execution of which his hand might be guided, there were produced hundreds of figures of domestic articles in which, although a family likeness be seen, there is a certain amount of individuality. Great unsteadiness and indefiniteness of object are perceptible as we descend in the series, and the last scene of all is reached, consisting of a scarcely decipherable scrawl, announcing the writer's impending dissolution, and bequeathing all his property to her who appears to have been the cynosure of his existence, the idol to whom all his efforts for many months had been devoted, but of whom nothing more is known than that she appears as a Lilliputian figure in the great proportion of his drawings.

This distinguished landscape painter laboured under general paralysis during the whole of the course which we have so briefly endeavoured to indicate, and died of the disease almost contemporaneously with the bequest of his means, and while engaged laboriously in the completion of a large landscape, when his muscles, rather than his mind, failed to obey the inspiration of his imagination and the suggestions of his will.

JAMES BARRY. Born 1741, died 1806.

We have had poets who "lisp'd in numbers for the numbers came," and it would appear that great artists have handled crayons when mere children, or, at so early a period of life, that the commencement of their effort had escaped the memory of their family. It is known that West, when denied the long recognised camel-hair brushes as the insignia and the instruments of his mind, as a truant boy abstracted the brush of the domestic cat in order to supply his wants. It is further known that Canova stole from the domestic churn the butter, of which he modelled the statuettes which were the forerunners of his future fame. In like manner Barry, though not accused of infantile felony, is recorded as having been carried away on a long voyage by his father, in order to substitute a trade for what the burly sailor naturally regarded as a mere pastime. Either through the instrumentality of that which is said to be an antidote to patriotism and courage as well as love—sea-sickness—or under the equally potent spell of genius, the experiment failed, and his parent, abandoning further opposition to what even his marine eyes may have recognised as a natural bent, the boy was allowed to return to prosecute his studies. These events appear to have preceded his scholastic days, and we may seek an interpretation for his intractable and isolated position among his fellows, and when actually subjected to instruction, in the course prescribed to him being as repugnant to his dispositions and tastes as was his life on shipboard. There is more quaintness than truth in the quotation "that as the twig is bent the tree's inclined;" for where the twig does not snap asunder, in a very large number of examples the bending, the training, the trimming utterly fail in accomplishing the object proposed, and are, in fact, invariably frustrated, unless there be some inclination, some instinct or idiosyncrasy, which renders the bending applicable to the twig, or the twig predisposed to the bending. In Barry's progress it would appear that a duplex course of instruction was going on continuously. In school he would be compelled to acquire the ordinary amount of classics and mathematics, but his nights were spent in drawing and what

was, in all likelihood, very promiscuous and very profitless reading. His pocket-money was expended in candles and pencils, and he resolutely resisted all invasion of his sanctum, by his mother or the servants, for the purposes of cleansing and comfort. His perversity and stubbornness even then attracted surprise, particularly when manifested in peculiarities of dress and in asceticism, which rivalled that of the religious orders. The latter habit may have been contracted in imitation of the practice of his mother, who was a zealous Romanist, and with whose Church he for a brief time fraternised. Notwithstanding his oddities, his inflexible temper, and somewhat repulsive manners, he was regarded by his companions as a prodigy of learning, a leader, and one who stood apart from themselves both in the eccentricity and the superiority of his talents and acquirements. It may be that at this juncture, or even earlier, the penumbra of the total eclipse, which long subsequently obscured the light of his genius, passed over his ripening powers, and that his pertinacity of purpose, his frugality and whimsicalities were but the revelations of that very marked and very morbid character which made him what he was. The first intimation of his special vocation, apart from the drawings of colossal figures which almost frightened his skipper father, were etchings of a volume of tales so obscure that it has never been traced. But the more public and picturesque disclosure of his ambition and powers occurred in an attempt to exhibit a picture of "St. Patrick's Landing on the Coast of Cashel," in the Dublin Institution for the Encouragement of Art, which produced so striking an impression upon its admirers that the name and appearance of the painter were demanded, who stood forward, a poorly clad and humble boy, and bearing such traces of his actual condition that his claim was discredited, and he rushed from the room burning with shame and bursting into tears. This affecting incident was witnessed by Edmund Burke. "There is a tide," says a great psychologist, "in the affairs of men;" there are epochs, say we, in the history of all erratic men, utterly inconsistent with the modern doctrine of the regular evolution of the mind, and with the permanent localisation of faculties, formerly so generally believed in, but which cause the essential elements of character to stand out in bold and painful relief. The climax now alluded to powerfully influenced the course of Barry. He became subsequently and for a long period deeply indebted to the friendly countenance and pecuniary aid of the eloquent senator, and was by his means supported during his early studies in London, and was subsequently sent to Naples and to Rome. His destination to the latter school was, in part, determined by the remark of Sir J. Reynolds that, in order to gratify his ambition of becoming an

historical painter, he must live in the Sistine Chapel. But, although he passed many studious days amid the glories and triumphs of Raphael and Michael Angelo, the presence of their works brought to the surface other qualities than admiration or imitation. He was disappointed, he questioned their eminence and ability, he was a critic rather than an academician. He was not impressed with the atmosphere in which he breathed, he was roused to irritability and hostility by what generally calms and elevates. He engaged in intrepid but rash controversies and quarrels, and to such an extent that it would be difficult to say with whom or with what he agreed. He carried home this disposition with him, and, although there were happy and harmonious intervals, his life might be styled an antagonism. His temper has been compared to a tornado, his oaths to horrible thunder. When entering upon the practical work of his profession, he devoted his taste and experience to what has been called his Grecian style, but the public was not tempted to reward his exertions, and poverty, if not want, began to add to the difficulties by which he was surrounded. He abandoned the class of subjects upon which he desired to build his fame, and addressed himself to what has been absurdly called his historical method. This was not merely a failure, but it betrayed in a wild, even ludicrous manner, the mental perversion of the artist. He depicted the "Battle of Quebec and Death of Wolfe," but the combatants were all represented in a state of nudity, and the British regiments recognisable by their standards, were stripped of everything else, and resembled in all but colour the North American Indians. At this period three features marked, in a very conspicuous manner, his general bearing. He was sunk in poverty, and naturally became irascible, peculiar, solitary, eschewing even the friends and companions who might have assisted him, but sternly and scrupulously honest. How far the contributions of his more affluent friends may have prolonged his endeavours is not known; and it is fair to infer that his resources were limited by the sale of his pictures, or to such illustrations as "Paradise Lost." But almost contemporaneously with the impersonation of the delirious fantasies in his American picture, the walls of his bare and spare dwelling, we cannot call it gallery, presented such exquisite subjects as "Orpheus," "A Harvest Home, or Thanksgiving to Ceres and Bacchus," and the "Victors at Olympia," and others. The real merits and reputation of these productions led, it may be believed, to his appointment as Professor of Painting. Moreover, at this, which may be called his full tide of fortune, the Society of Arts had indulged him in granting him two exhibitions of his paintings, which produced, in clear profit, £500. Although living in extreme penury and obscurity, it may be

understood that from such sources his natural parsimony had accumulated considerable hordes. The amount of his treasures was disclosed by the success of a party of burglars, who despoiled his humble domicile of £400, which was never recovered. As invariably happened when the very hidden and equable course of his life became rippled and ruffled, the disordered elements were thrown up, and the impure taint came to the surface. His chagrin and disappointment over his misfortune tempted him to accuse certain of his brother academicians of having committed the theft. This monstrous calumny, followed as it was by the publication of an allegation that the same gentlemen were in the habit of dividing the funds of the association amongst themselves, provoked a prompt and somewhat illegal retaliation by which he was summarily expelled from their body. Notwithstanding, and during, this internecine conflict, Barry, fast hastening to the culminating point of his career, produced what has been regarded as one of his most famous productions, "Pandora." Alienation—it might be called ingratitude—sometimes separated him from his early and munificent patron, Edmund Burke. But, when, apparently in the lowest depths of poverty or absurdity, it is related that the great moral hero condescended still to associate with his *protégé*, and even to partake of his hospitality, if the following description can be called such hospitality. Burke joins him in his home, which had formerly been a carpenter's shop, of which it still retained traces. The walls were divided between the artist's paintings of the "Adelphi" and "Pandora" and the labours of the spider. All around, and in confusion, were straining frames, old sketches, and a printing press, from which he threw off his own engravings. The roof and the windows contributed to ventilation; but amid much dirt and disorder, the fire burned brightly. The artist welcomed the senator, placed a pair of tongs in his hands, enjoined him to make himself useful, and to cook a juicy steak from Oxford market while he ran for the porter. He presently returned utterly disconcerted that the wind had scattered the ambrosial foam from the pot in which he felt convinced his guest would have revelled. This curious example of scanty means, of friendly kindness, and of capacities which might have converted their possessor into a millionaire, presents a painful contrast to the dastardly, shabby, almost dishonest greed of even a greater master in art, Rembrandt, who would have grasped and exacted from his pupils what might have satisfied his desires. "I visited Barry in his den," says Southey, "and have been admitted in his worst (that is to say his maddest) days, when he was employed upon his 'Pandora.' He wore at that time an old coat of green baize, but from which time had taken all the green that ministrations of paint and

dust had not covered. His wig was one which you might suppose he had borrowed from a scarecrow; all round it there projected a fringe of his own grey hair. He lived alone, in a house which was never cleaned, and he slept on a bedstead with no other furniture than a blanket nailed on one side. I wanted him to visit me. 'No,' he said, 'he would not go out by day, because he could not spare time from his picture; and if he went out in the evening the academicians would murder him.' In this solitary, sullen life he continued until he fell ill, very probably for want of food sufficiently nourishing, and, after lying for two or three days under his blanket, he had just strength enough left to crawl to his own door, open it, and lay himself down with a paper in his hand, on which he had written his wish to be carried to the house of Sir A. Carlisle, in Soho Square. There he was taken care of, and the danger from which he had thus escaped seems to have cured his mental hallucinations. He cast his slough afterwards, appeared decently clad, and in his own grey hair, and mixed in such society as he liked."* Although a relapse of his unhealth must have taken place, a brighter sunrise seemed about to dawn in the generous act of Sir Robert Peel by the purchase of an annuity from funds collected by subscription; but the boon arrived too late, and Barry, taken ill in a chop-house, died alone after a solitary death-watch of forty hours' duration.

It would be difficult to unravel the tangled yarn of this man's mental constitution. He was a compound of morbid tendencies and of distinguished talents and taste. He resembled those chronic lunatics, once educated men, who preserve the form and sequence of words without their coherency. He never said a foolish thing, yet never did a wise one. There were associated in his heart the greatest and grossest qualities, sublimity, and absurdity. Either he realised Talleyrand's definition of the use of language by applying his genius, in order to conceal his madness, or he possessed two natures—*deux âmes*, as Pascal somewhere says—which, though strikingly incompatible, and unconnected generally, ran in parallel courses, though sometimes crossing and commingling. If placed at the bar of a court of justice, he would have been condemned as unsound and irresponsible, and acquitted as possessing abilities denied to the wisest and the best of his fellow men.†

WILLIAM BLAKE. Born 1757, died 1827.

There are many individuals who pass through a long life of brilliant distinction or mold-warp obscurity without betraying

* *Life of Southey*, Vol. vi. p. 54.

† Cunningham's *Lives of British Painters. Contemporaneous Memoirs*.

puzzlement or perplexity, folly or feebleness, but who, towards its close, lose a clear sense of their personality and surroundings, conceive that they are in want and misery, that they are no longer inmates of their familiar home, that they are deserted, shunned, and must wander elsewhere and sink into that "last scene of all and mere oblivion," senile dementia. There are others who, in the very midst and zenith of a busy and useful course, burst into paroxysms of fury or droop into decay and oppression, but from whom the storm or the cloud may pass away, leaving the mind calm and clear and serene. There are still others, whom, from causes and in circumstances which afford no cue to the crisis, become haunted and hunted by phantasms which flit and flash before the eye, by threatening and disgusting whispers or noises which assail the sense of hearing, by imaginary sappers, savers, and irritations of the skin, all of which may pass away and be forgotten. But we have never encountered an example, until we studied the biography of William Blake, where, throughout a long career, varied by humble though diversified incidents, there was an uninterrupted succession of delusions, hallucinations, and wild imaginings; where there was scarcely a phase in the constitution of his mind which was not modified by perversion, nor a pursuit in which the real could be certainly and satisfactorily separated from the unreal, the internal impression from the external hobgoblin. Contumacy or the inborn inflexible impulse to rise above present circumstances is a first quality recorded of the boy William Blake. He resisted the desire of his father to make him a hosier, in order to become a Da Vinci, and astounded that "citizen of credit and renown" by preferring the highly coloured daubs which appear in booksellers' windows to worsted. His mother, more gentle, or discriminating, believing that the angels had whispered to the youth his future and his fate—and in this superstition may be traced many of his subsequent mental peculiarities—favoured, and, it may be, encouraged his taste. Her apartment naturally very soon became his picture-gallery, where his first efforts in drawing and versifying met her admiring eyes. He was a quiet, docile boy, and developed into a polite, courteous, meek artist. It is fondly affirmed that at ten he became a poet, and at twelve an artist; and it is certain that his father, detecting in his first essays the germs of latent excellence, or wearied into humouring him, caused him to be bound as an apprentice engraver at fourteen. In respect to his poetic effusions, it may be confidently asserted that the "Songs of Innocence" were composed while he was in his teens; but though rough, they are so vigorous as to promise that future excellence and greater melodiousness which were afterwards realised. The apprenticeship did not suffice, as

his master did not prove to be a teacher, and although he worked hard mechanically in his professed vocation, he sought for instruction and inspiration under Flaxman and Fuseli. It is impossible to fix upon the precise date of that mental state in which he seemed to stand in relation to the unseen and supernatural. But, subsequent to a marriage, which offended and caused his separation from his father, to a partnership with a fellow-enthusiast and a brother as a print-seller, and to the failure of this enterprise, he reappears as an engraver. It must be noted that his wife, a humble but sensible companion, efficiently assisted him in working-off and colouring the impressions of his plates, made drawings in imitation of her husband's compositions, and is supposed to have rivalled him in almost all materialistic operations, although not in conjuring up those fantastic, or fearful, or simply fanciful phantasms by which he was surrounded. Hero-worship must have animated this ductile and imitative helpmeet; for, when dazzled and distorted by the pyrotechnic absurdities of Rousseau, he resolved to live in a state of nature, she followed in reducing herself to a state of nudity, and creating a back court into a garden of Eden. From this era the biographers of Blake portray him as living in two worlds, one the visible and palpable and rather sordid dwelling which he inhabited, and the other an ethereal and supersensuous region peopled by what to others were "airy nothings," but were to him real and substantial and even familiar beings, who were recognised by him not as the creations of his own morbid or mystic imagination, but as individuals with whom he had, or could at will have, constant communication, whom he not only saw and heard and understood, but whose lineaments, expression, and dress he could and did transfer to canvas. Poems published by him and designs expected to captivate the taste of an artistic public proved to be unproductive speculations; but, although not utterly prostrated by these failures and compelled to subsist by the labours of the graver, he became melancholic, avoided intercourse with friends and fellow-men, and lived as a recluse in that London which to the penniless and the powerless is as much a desert as the Thebaid was of old to the vision-seer, St. Anthony. Frugal and, perhaps by necessity, abstinent, and self-denying, he receded more and more into that imaginative paradise where were supplied all the luxuries, enjoyments, and glories which were unattainable in his ordinary career, where his associates were the poets, the heroes, the saints, the hierophants of former ages, all of whom his fancy endowed with living and breathing forms and attributes, and in whom he, by mental concentration and subjectivity, began to believe were actual and substantial companions,

and as truly present to his external senses as were his wife and other relatives. Sometimes the phantoms took the form and were accepted as relatives, and established personal and practical relations with him. A notable example of this personal and practical interpellation is afforded when, conscious of the presence of his brother, or of his shade, he sought counsel and obtained such instruction from his supernatural visitor that he achieved great improvement in his mode of engraving or stereotyping both his poetry and figures. The drawing was made on the copper, on the suggestion of his spiritual instructor, by means of a certain liquid, the nature of which was never revealed. Whatever may have been the nature and circumstances of this consultation, the novel manipulation proved a success. The suggestions or revelations of actual or imaginary guides did not invariably eventuate so happily. It would appear that about the same time Barry and Stothard commenced a drawing of the "Canterbury pilgrims," when a suspicion, even an accusation, of plagiarism arose. But a controversy and alienation between the fellow-labourers occurred: when the explanation or unravelling of the mystery was found in a commission conveyed by Cromec, but which was altogether visionary and imaginary. The finished subject of this embrogliement, with sixteen others, was exhibited in his brother's house; but whatever their merit might otherwise have been, the effect was destroyed by an accompanying catalogue crowded with wild fancies, absurdities, and a railing against the demon Correggio. But such miracles or mirages were not confined to the foggy atmosphere of London. Invited to Sussex to illustrate his edition of Cowper, he was met on the downs and breezy uplands by Dante, Virgil, and Homer, whom he describes as coloured shadows, and with whom he held high converse, watching fairies and their funerals, and all the milder and gentler forms of demonolatry. For years he had sighed for an interview with Satan, whom he had considered to be a grand and splendid spiritual existence; but at last, unannounced and unexpected, when Blake was going up the stairs of his house, a light streamed around him, and he saw the fiend glaring upon him through the grating of a window, when, opportunely, his wife conceiving that he was visited by a poetic vision, supplied such materials as enabled him to execute a portrait of his infernal visitant. This was assuredly not the first transcript of the lineaments of his infernal or supernal associates. In connection with this apparition we have to recall his trial for high treason, originating in a struggle with a soldier, in which he conquered, as he conceived, in virtue of the strength imparted to him by a demoniacal force. If his *atelier* was not crowded with

the hideous martyrdoms of primitive times, preserved in Belgian galleries, with the majestic warriors and weird wizards who fought for or frightened the lieges in the middle ages, with the drunken and frolicsome boors of Ostade and Tenniers; his easel ever bore the features or the figures of the continuous procession of his ghostly or ghastly companions, while every morsel of canvas, every scrap of paper, was covered with glorious or grotesque representations, with "quips and cranks and wanton wiles," either poured forth by his own prurient capacity or borrowed from the authors with which he interlarded poems of his own composition. Except in the curious work by the Rev. Robert Kirk, entitled "The Essay of the Nature and Actions of the Subterranean and Invisible People," which described the whole parish of which he was minister as teeming in its glens, caverns, mounds, with fairies, ghosts, goblins, &c., can there be found any description of so grotesque and numerous a commonwealth as crowded around the painter. It is sad and sweet to learn that the vision of his boy brother was almost incessantly present to him. These pictures of an ideal world, and sometimes of known and historic personages, attracted so much attention and admiration that orders for such portraits constituted part of his occupation. Upon one occasion compliance with a request to supply a likeness of Sir William Wallace presented considerable psychological difficulty. Receiving the order, and in the presence of his employer, his passion for heroes burst forth in the exclamation, "Sir William Wallace! There! there! I see him in all his glory!" and forthwith he commenced the drawing, but suddenly paused, and when inquiry was made for the cause of the interruption, he replied, "I cannot finish him, Edward I. has stepped in between him and me." What shadow, sentiment, or visible object intervened? Blake himself had no theory as to this phantasmagoria, the creations came and went unheeded; he believed in their existence but had no creed, and was not a propagandist; but still, notwithstanding the simplicity and sincerity of his nature, there gathered around him a certain number of proselytes, who conceived that what he saw was not fancied but seen, and that the paintings which clothed his walls were true and trustworthy images of beings who were positively present, and with whom he held communion. But others, suspecting that these apparitions, whether summoned by his will or not, were photographs from external objects or mental conceptions, and observing his absorbed and abstracted expression while gazing on his lay figures, suspected that he might be acting under the influence of opium. The suspicion that he reproduced merely what had been deeply and lastingly impressed upon his brain is corroborated by the experience of

Sir J. Reynolds, who, after passing a day in dwelling upon faces, carried them with him into the darkness. The theory of narcotic inspiration is borne out by the experiments of Moreau and the consumers of *Cannabis Indica*, and we ourselves noted in the conduct of a celebrated lecturer upon astronomy, who supported an intensely nervous frame by opium, that upon one occasion, having swallowed too much or too little of the drug, imagining that he had drawn a figure on the black board before him, but upon which he had left no trace, he continued during the whole evening to see the supposed figure in his own mind and to demonstrate to his audience as if it were in their mind.

Prolific as Blake was in his art productions, these were greatly exceeded by his poetical compositions, of which he left one hundred MS. volumes ready for publication. Certain of his more enthusiastic admirers have ranked the following as equal to Shelley or Byron:—

Tiger, tiger, burning bright,
 In the forest of the night,
 What immortal hand or eye
 Framed thy fearful symmetry?

 In what distant deeps or skies
 Burn'd the fervour of thine eyes?
 On what wings dare he aspire—
 What the hand dare seize the fire?

 And what shoulder, and what art,
 Could twist the sinews of thy heart?
 When thy heart began to beat,
 What dread hand form'd thy dread feet?

 When the stars threw down their spheres,
 And sprinkled heaven with shining tears;
 Did He smile his work to see?
 Did He who made the lamb make thee?

When aged seventy-one he passed gently away from this region of shadows to that of which they are but the reflections. Notwithstanding a full consideration of all the portions of his history laid bare to the public, one of his biographers has ventured to propound the interrogatory, Mad or not mad? Sceptical himself as to any deviation from normal mentalisation, further than the phenomena seen by the special faculty of imagination being accepted as realities, he furnishes a catena of discriminating authorities, who, he conceived, supported this opinion. But on an analysis of an estimate arrived at by these critics, it will be discovered that, while one defines him as an eccentric, another as a visionary, a third as an enthusiast, a fourth as a superstitious ghost seer, all feel it expedient to mollify or to apologise for modes of action inconsistent with the

habits of other healthy men; it may be safely affirmed that if he was not insane in conduct, Blake betrayed undoubted symptoms of his mental malady in painting. Many of his drawings and engraved illustrations are extant, and while we may merely smile over "the ghost of a flea" as a freak of fancy, or experience awe on tracing the lineaments of the long dead Wallace, of Edwards I. and III. &c. as, to his conviction, living and animated before him; we cannot restrain our pity and sympathy for the vagaries and heated fancy of the author of the "Inventions of Job," "The Milton," and "Paradise" which, without a key, is incomprehensible, and his mystical and allegorical writings.*

BENVENUTO CELLINI. Born 1500, died 1571.

It would be charitable to conceive that Benvenuto Cellini was of insane mind from the period of his first resistance to his father's will and wishes in early childhood. Yet, with the advantages of education, with a profound and ever active veneration for Catholic rites and observances, if not for Catholic religion; with exquisite taste and refinement in the departments of art, in which he excelled and to which he owes his fame; with the impressions received from the society and intercourse of the prelates and high dignitaries of the Church to which he belonged; and of sovereigns, courts, and camps—wherever, in fact, discipline and polish were accessible—he was a villain and a vagabond. Not merely querulous, ambitious, quarrelsome; not merely an irritable intriguer; not merely of dissolute and degraded morals; he confesses to have been thrice a murderer, in other words, to have assassinated rivals or enemies, who had thwarted or frustrated his desires or designs. His life, which is a romance of genius, crime, and superstition, through which there runs a poetic current of dreamy delusion, commenced in 1500, in Florence. He was the son of an architect who had an hereditary predilection for art and music. The first instructions received by Benvenuto Cellini were from his father in flute playing, but so strong was the aversion of the pupil to such studies, and so strong was his preference for modelling and drawing, that a compromise seems to have been arrived at, and the boy was made apprentice to a jeweller. In the phraseology of the present time, he became a silversmith; but instead of spoons and salvers, the occupation of artificers of this class was then directed to the cutting, carving, or sculpturing gems and the precious metals, to the production of chalices for the churches and of ornamental

* *Biographical Notices*, passim. *Life of William Blake*, by Alexander Gilchrist, 1863.

plate for the tables of the noble and the affluent. As a sculptor, properly so called, his most famous works are the figure of Perseus and the head of the Medusa; but in his earlier career, and, indeed, throughout life, he was more celebrated and more patronised for his production of sacramental cups, embossed or embosomed in scenes in relief, of crucifixes and other sacred ornaments and emblems connected with worship, and of chased dishes, salt cellars for domestic purposes, in the style of the Renaissance, but so exquisite in design and execution as to be held in high esteem at the present time. The first independent adventure of this brilliant youth was by proceeding to Rome, where, although he must have lived in the very atmosphere of the fame and achievements of the immortal Raphael, and where he must have heard of, or witnessed, the pomp and pageantry of his apotheosis, he never mentions his name nor his sacred mission in ornamenting the noblest shrine of the Deity in the world. This silence cannot have sprung from jealousy, as the course of the greater and lesser genius lay in opposite directions, but from the reticence or forgetfulness engendered by the egotistic absorption of selfish ambition. In the course of a few years he is again found in the Eternal City engaged at his trade as a jeweller, and apparently under the patronage of the Pope (Clement VII.) and the nobility. In one of his residences there, which occurred during the sacrilegious sack of the city by the Constable of Bourbon, he acquired, or imagined he had acquired, a new and great distinction by having shot that celebrated marauder during the assault. Be this a fact or a fancy, he flies to Florence and then to Mantua, being constantly employed in imprinting the suggestions of his imagination or the truths of Christianity upon vessels or ornaments of gold or silver. He was subsequently recalled to Rome, not merely to exercise his craft but was appointed to make dies for medals and for use in the mint, and was ultimately elevated to the dignity of the Pope's mace-bearer. These duties and honours seem to have been continued under the subsequent Papacy of Paul III.

Yet, notwithstanding his apparent elevation and aggrandisement, he appears to have been in constant flight from one town to another, a restlessness which was partly the consequence of his violent temper and of the quarrels and difficulties into which he was plunged by this infirmity, partly of his impecuniosity, but mainly, it is conjectured, by mental unsteadiness and visionary projects. After receiving the countenance of many royal and ducal personages, he is installed in the favour of Francis I. of France. This king who confided to him the execution of various objects of art and the ornamentation of the palace of Fontainebleau, rewarded him by letters of naturalisation, an annual pension

of seven hundred scudi, and a small estate. This connection was dissevered, it is suspected, by his own defects, as well as by the intrigues of enemies or rivals, and he is next encountered in Florence, under the auspices of Duke Cosmo de Medici, where, in addition to his professional vocation, he cast his celebrated figure of Perseus which still remains as a monument of his genius. His return to Florence and to the munificence of the family of Medici was signalled by his being ennobled by the reigning Duke, and by his name being inscribed on the golden roll of that proud city, by the donation of a house, and by other acts of lordly favour. This epoch in his history must have been critical, and perhaps the commencement of serious dispositions and moral respectability, for we now hear that he entertained intentions of entering the Church to which, amongst all his vagaries, he remained attached; and actually received the first tonsure. But his aspirations after sacred or sacerdotal functions must have been dulled or misdirected by another ardour; for his marriage is next announced. Beyond his death, which happened in 1571, and the bequest of his property to his three legitimate children, nothing remains to be recounted, for of his numerous illegitimate offspring or of their ultimate fate we possess no information. That the mind of Benvenuto Cellini was at all times superstitious and credulous, as well as irritable, impetuous, and imaginative cannot be doubted. His was an age of marvels and miracles, and he, perhaps, did nothing more than concur in a current belief when he accepted necromancy, and trusted to incantations for the discovery of events in which he was deeply interested, but which were shrouded in the future or designedly concealed from his knowledge. There are grounds for supposing that his highly wrought and inflammable fancy led to exaggeration, to the mystification of commonplace circumstances and to the confession of crimes which were never perpetrated, and of conduct which disclosed the reign of his passions and propensities, but could not redound to his reputation even in mediæval Italy. He was, besides, the sport, the victim, or the favourite, as his position may be estimated, of spiritual or supernatural visitants. One portion of his unsettled progress places this characteristic very broadly and distinctly before us. With a sort of dramatic injustice he was accused of embezzling jewels placed in his hands, and committed to the castle of St. Angelo. Although the governor was friendly to him, regarding him as a good Catholic, he was consigned to a miserable dungeon half-filled with water, while tarantulas and other noxious creatures crawled around him, and where his only comfort consisted in a rotten mattress. It is true that this severe discipline followed an attempt to escape, in which he broke his leg. But, under all this

wretchedness and ignominy, and after he had so nearly effected suicide as to become insensible and to appear actually dead, he is visited in dream or delusion by a beautiful angelic youth, who reprimands him for his desire to die, to maim and mutilate the body given him by God, and to escape from the destiny appointed for him. So solemn and effectual were these heavenly counsels that he resolves upon repentance and reform, and records his resolution in the best way he could. This record assumed the form of a penitential dialogue between the soul and the body. But, although in poetic measures, bears no marks of a seraphic origin. At a juncture when the vengeance of the Pope might be dreaded he is again visited by his invisible but audible monitor, who urges him to engage in fervent devotion, during which he was brought into the presence of the Supreme Being and conversed with Him. Again, after prayer and an ardent petition that he should receive some intimation of Divine favour, such as seeing "the full Lord's sun even in dream," he is led by a spiritual guide, who hurried him like a whirlwind to a spot where he was unveiled and presented the aspect of a youthful and beautiful being, showed him the whole race of mankind who had preceded him on the earth, then conducted him by various devious ways to a position whence he gazed upon the sun, whose resplendent lustre dazzled his eyes, although the whole force of the rays fell to the left side, he, at the same time, addressing the luminary in words approaching to worship. Forthwith the sun appears to swell and to burst and thus disclose the crucifixion, which gradually becomes a representation, first of the Virgin and Child, and then of a priestly figure; this revelation or phantasmagoria ministering more and more to the intensity of his wonder and piety and faith. The visionary delusions are not entirely confined to religious subjects or the interposition of spiritual visitants, as he becomes impressed with the belief that a murderous design is formed to destroy him, and the means devised seem appropriate in the case of a lapidary, by the administration of diamond dust, which, it was calculated, would gradually and secretly accomplish the purpose in view in five months. The greed of one of the conspirators frustrated the plot, by substituting the powder of a false for that of a true jewel. Upon another occasion he escapes disease and death threatened by the climate of Ferrara by a remedy nearly as singular as the poison alluded to, in fact by confining his food exclusively to the flesh of wild peacocks. In whatever light regarded, either as a superstitious seer or a victim of suspicion, or a valetudinarian or hypochondriac, this artist affords another illustration of the union of genius, depravity, and delusion.*

* *Memoirs of Benvenuto Cellini*, a Florentine Artist; by himself. Translated by Thomas Roscoe. 1847. &c.

BENJAMIN ROBERT HAYDON. Born 24th January 1786,
died 22nd June 1846.

"THE coroner's jury found that the suicide was in an unsound state of mind when he committed the act." Such was the verdict of upright—and it may be acute—men, who knew nothing of the misfortune, the disappointed ambition, the misapplied talents of the man of genius of whom they spoke. It may have been a tribute to the observation of a brilliant imagination; it may have been a shroud to cover and conceal the wreck and decay of a Hercules in art; it must have been, like similar verdicts, a judgment founded upon a single and final act of the individual. It would be preposterous to expect analysis of character or profound perspicacity in such a court, but, in consideration of a true estimate of the reputation of the deceased, of the feelings of relatives, and above all of the interests of science, it would be infinitely preferable to avoid all conclusions which involve a theory or a presumption. Psychologically it should be recorded that, long previous to the commission of the fatal act (May 2, 1821), the shadow of self-destruction had darkened the gloom when he felt "fardels he could not longer bear." It is true that throughout the whole of this artist's life there swept a deep tumultuous current of unhealth, of impetuous impulses of self-will and self-reliance, of miscalculated powers and pretensions, and of wild and Utopian projects rivalling the enormous breadth of his canvas. It is true that his course was ever interrupted and distracted by accidents over which he had little control, by improvidence, over which he might have exerted some influence, for while he spent much of his time in the King's Bench we hear of his honourable liberation; by the lack of that co-operation and patronage and promotion of his views as to the supremacy of art which he had deceived himself into expecting, and by the acerbity, irritability, and misery which a strong man feels when he is firmly bound by what he regards as the cobwebs of sophistry, of selfishness, and of national blindness.

It is a trite truism that the boy is father of the man, but there is more unepigrammatic truth in the fact that in the unconscious or unbridled petulance and peculiarities of the child may be traced the moral forces which are to be dreaded or directed. Benjamin Robert Haydon is portrayed as intensely self-willed, as animated by paroxysms of ungovernable rage, which could, however, be allayed or arrested by the sight of a picture book. Sent to school at six, his principal characteristics seem to have

been improvising drawings of the guillotine from the description of French prisoners then in his native town of Plymouth; and in substituting for the commonplace mischief of a school-boy the persecution of his teacher, himself a painter, by blurring and mutilating his productions—acts, however, which may have lighted up the fire of genius within his own heart. Having passed through the Grammar School, where he seems to have acquired a taste for, as well as a knowledge of, classical literature, which he ever afterwards cherished, he is nominally bound as an apprentice to his father, a bookseller, but regards such a fate with repugnance—detests, ridicules, caricatures the details of his occupation—denounces them as unworthy the attention and ambition of an enlightened and gifted mind, such as his own, and at length, by long-continued, determined, dogged resistance he burst the bonds which connected him with his home and hereditary profession. During the estrangement which followed, and the progressive expatriation—first from shop, then from parlour, to his ultimate destination, the garret—he appears to have worked with irrepressible and indefatigable energy in the study and prosecution of art, and, with an intuitive tact as to what should form the basis of figure painting, to have ransacked his native town for anatomical books. Either wearied out by continued resistance and by the failure of parental discipline and persuasion, or adopting the policy that the proclivities of the boy should be indulged, perhaps utilised, Benjamin Robert Haydon triumphs over domestic rule, receives £20, and starts for London.

We next find this aspirant after fame, or it would be more correct to say after the due appreciation and recognition of art, in the London Exhibition, gazing in enthusiasm and envy on the speaking walls, in possession of the long-coveted Albinus, the purchaser of various models of arms and legs which he studies, sketches, dotes upon from morn to night; or rather interminably, for his day lasted nearly 20 hours; divided between anatomical study and drawing, so intently and silently prosecuted that upon one occasion his gums became ulcerated from the pressure of his teeth. It is important to note here that he had an opportunity of attending the lectures of Sir Charles Bell, and that his study at all times was severe though spasmodic. He became acquainted with a large group of distinguished painters, the *protégé* of some, such as Fuseli, who petted him; the admirer of Northcote, who was surly and snappish; the friend of Opie and Jackson; and the familiar and lifelong friend of Wilkie. His meeting with the great Swiss painter of Satanic hobgoblins is more interesting from the impression which the surroundings must have produced upon a timid,

nervous boy, than from the presence of his insignificant patron. The walls of the gallery into which he was ushered were covered with "Galvanised devils, malicious witches brewing their incantations, Satan bridging Chaos and springing upwards like a pyramid of fire, Lady Macbeth, Paolo and Francesca, Falstaff and Mrs. Quickly—humour, pathos, terror, blood, and murder met one at every look." That these gratifications were glittering rather than gilded may be gathered from the fact that, in order to enable Wilkie to accompany him to a first view of the Academy pictures, the coat of the one is put in requisition to clothe the other respectably. He is at length recognised as a neophyte of this sacred fane, but all these brilliant and promising prospects and preparation were for a time interrupted by the serious illness of his father. With his characteristic reverence he rushed to the sufferer's bedside, where this powerful, almost typical, element of his mind, as well as his strong family attachments were brought to bear against his original predilections, and to win him back to his home, and the more homely, and perhaps healthy avocations which it afforded. In 1807 his first production was admitted into the Exhibition, bore so many marks of genius, and obtained such unqualified laudation, as amply to reward the author for all former difficulties and delays, and to stimulate and support him in the conception and execution of his next picture, *Dentatus*. The sudden death of his mother evokes that intense filial veneration, almost worship, to which we have before adverted; his profound sorrow finding expression in pathetic regrets, in clinging to or kneeling beside her coffin in the family vault, and in all those manifestations which a deeply attached and devoted child feels for her who has been the guide and guardian of youth. His return to his favourite pursuits brought him into contact with the Elgin Marbles, his admiration of which amounted to idolatry, and his vindication of the beauty and influence of these forms involved him in a controversy with a patron, in which his pride is said to have been magnified, his purse and interests minimised. His first picture of decisive merit seems to have been a scene from the *Flight into Egypt*; and in the course of following years he created the works upon which his reputation rests—*Macbeth*, the *Judgment of Solomon*, *Christ Blessing Little Children*, *Lazarus*, *Jerusalem*, &c. In connection with the execution, the completion, and the fate of these, there fall to be especially noted two circumstances: his habitual piety and devotion, of the genuineness of which there can be no doubt, and his inexplicable impecuniosity, constantly involving him in debt and difficulty, rendering him the beneficiary of charitable persons, and even of loans from his pupils, upon

whom he had no claim, depending upon such sources even for a dinner. This sincere devotee was known to pray daily, or, more frequently, in his studio, whether in the Protestant fashion of a general supplication or as a special petition for help and hope on the work on which he was engaged, cannot be determined, for, with the exception of the last spasmodic and agonised utterances on the morning of his death—"God forgive me. Amen;" "Finis of B. R. Haydon;" "Stretch me no longer on this rough world." *Lear*; "End of 26th volume,"—although some of his orisons have been preserved, they do not refer to specific objects of desire, and we possess little evidence of the awful and mysterious intercourse of this sufferer with his God. It would be rash to affirm the existence of superstitious feelings from his scrupulous regrets in having executed a semblance of the Arch-demon. Other artists of heated but healthy mind are reported to have sought inspiration or assistance from the Source of all creative power. Painters have not only prayed for guidance and governance to a noble end, but, after the realisation of their design, have regarded the beautiful object which had risen into being under their hand as transcendental and supersensuous, as a reflex or transcript of a heavenly image which had by a Divine will passed through their spirit, and as deserving and receiving a sort of worship or cultus from themselves. The most celebrated of this class is Fra Angelico, who, although almost confining himself to religious subjects, never touched his canvas until he had said or seen Mass.* In like manner the Spanish painter, Vicente Joanes, well understood the dignity of his task, and not seldom applied himself to it with a zealous fervour worthy of the holiest friar. Like Fra Angelico at the dawn of Italian painting, he was wont to prepare himself for a new work by means of prayer and fasting and the holy Eucharist. The life of Luis de Vargas was as pure as his style; he was accustomed to discipline his body with the scourge, and, like Charles V., he kept by his bedside a coffin, in which he would lie down to meditate upon death.† Although the balance sheet of the monetary affairs of Haydon be not before us—although we are familiar with the irregular and precarious incomes of such men—it is patent that he obtained large sums, from £100 to £300, from the sale or exhibition of his pictures, but that he was ever poor, borrowing, desperate; that his repeated incarceration in the King's Bench, from which, however, he was invariably discharged without opposition, scandal, or stain; that the presence of bailiffs in his humble and otherwise happy home; that his rejection from

* Denniston's *Dukes of Urbino*.

† *Annals of Artists of Spain*. By W. Stirling.

the sacred and coveted precincts of the Academy, where not a vote was tendered in his favour; that the ill-success of his fresco designs, must have all pressed heavily, even morbidly, upon so sensitive a nature; but there exists no proof that either his courage or his artistic powers broke down under this incessant accumulation of misfortune and misery; nay, apparently supported by the grand Utopia of his life, the elevation of art to its legitimate rank and influence, he seems to have cast off these assaults as the rock baffles the spray of the summer sea, and to have stood unmoved by all evils except the frustration of this cherished vision. In illustration of this it should be recorded that a picture, the Mock Election, prized and purchased by the king, was suggested and sketched during one of his compulsory visits to prison, and is a graphic transcript of some of the persons and events witnessed there. It is highly probable that the persistency or obstinate prosecution of this cherished project, it may be almost called a monomania; its introduction in season and out of season with those in the possession of power and eminence, with those who could appreciate his plea although they could not forward his plan, and with those who treated both as a crotchet, was the cause, or one of the causes, of his unpopularity, and of his being shut out from the ordinary avenues to honour and reward. It is next to certain, however, that his conflicts with the Academy, with certain of its members, and with the opponents of his cherished schemes, must have inflicted deep and dangerous wounds in a spirit so sensitive as his. That he was a man of decided genius cannot be denied; for, although this is no suitable sphere for art-criticism, the favour with which many of his productions were received by competent judges, by exacting patrons, and by the general public, afford sufficient guarantees both of the promise and the fulfilment of great imaginative efforts. Even the abstention of the Academicians from giving a solitary recognition of his talents, and of the reputation he had already achieved, cannot be accepted as a final judgment upon the subject, as we find him at the very time when this fiat was pronounced surrounded by groups of admiring and advanced pupils, potentially distinguished artists, including Landseers, Eastlake, Bewicke, Harvey, Chatfield, and Lance, who sought instruction and guidance from his words and works, although they may not all have followed the path which he encouraged them to pursue. Another illustration of the powers and versatility of this man may be gathered from his triumphant progress in Scotland. There his reception amounted to an ovation; there the golden shower fertilised his path to the extent of £3,000. He became the

friend of Scott, Wilson, Raeburn, and their hospitality was only exceeded by the respect and admiration which the efforts of his imagination called forth; and even his journey with Wilkie to Paris and the Continent in earlier life could not have conveyed to him such important impressions. When necessity compelled him to abandon the grander efforts of his fancy, the heroic department of his profession, as it has been designated, he condescended to paint portraits and small pictures in order to supply his immediate wants; and by another downward step he became a lecturer on art in general; but so great was his eloquence and success that it may be affirmed he only then attained to the zenith of his fame, and only then found free scope for the development and exhibition of that intelligence which had hitherto been confined, his admirers would have said cramped, by being limited to a special exercise of power. Once again he visited Scotland; once again his efforts were rewarded, but then as an orator, his dissection of the hard and rigid plates, published by a northern anatomical Professor, have been described to us by a listener as more like the incisions of a scalpel than as the touches of an artist, aided as his scathing exposure was by his recollections of his old friend Albinus and by his wonderful illustrative dexterity by means of coloured chalks on the black board. This unfortunate man of strong will and perseverance, amounting to obduracy, long sustained by a sincere though perhaps a vague religious sentiment, in the possession of a home as happy as was consistent with penury and the ever-recurring ebb of fortune, this Avatar of a new and animating creed, which was met by scorn or scepticism, fell a victim to disappointment in the failure of his cherished theory and in the judgment pronounced against his pictures of Aristides and Jerusalem, and died by "the visitation of God." Is it philosophically correct to accept suicide as a sign or a synonyme of madness? *

EDWIN LANDSEER. 1802-1873.

It is instructive that the best established illustrations of the hereditary transmission of qualities should be afforded by mental disease and mental distinction, by mental capacity or incapacity. It is not incumbent here to demonstrate either the real existence, the origin, or the laws of the descent of mental or physical qualities. Public and professional opinion have declared strongly in favour of the belief that health or disease in various aspects or degrees may pass from sire to son through many generations, and even for centuries. He would, indeed, be a bold disputant who could

* Biographical Memoirs. *Haydon's Autobiography and Journals.*

deny the probability of such a hypothesis when the genealogy of such a man as Sir Edwin Landseer is presented to his notice. It would appear that this gifted genius represented, either directly or collaterally, by consanguinity of family connection, a long succession of distinguished engravers, whose work and fame could be traced back for nearly three hundred years. It is true that the transcendent eminence of our countryman was achieved by the brush rather than burin, by painting chiefly and not by engraving ; but the investigations of Galton justify the opinion that it is the general power, play, or inspiration of imagination which is handed down, and that its special direction or application is determined by the mental constitution, the education, or even by external circumstances. That Edwin Landseer was not deficient in the family talent and characteristic was proved by several successful essays in engraving executed in early life, but that his predilection for painting was called into existence even before these attempts were made and almost in infancy, is demonstrable. In precocity Sir T. Lawrence somewhat anticipated him ; as it is recounted that this prodigy could declaim in eloquence and could execute correct likenesses when five years old. As in other instances of a powerful inherited tendency, Edwin Landseer was precocious, and it is narrated that so soon as his tiny fingers could hold a pencil, he was led or allowed to go into the fields to sketch the sheep that pastured there, and that his drawings were executed with wonderful fidelity. This occurred when the child was five years old, and the spot consecrated by these efforts of infantile genius can still be pointed out and still contains an old stunted oak tree, under the shade of which he sat, but which his hand does not seem to have immortalised. The locality has been identified from information derived by W. Howitt from the artist's father, but is now perhaps covered by some of the stately or unsightly piles of houses by which the metropolis is rushing into the country. From this, the beginning of his career to its close, he imitated or anticipated the principle and practice of his friend, W. Hunt, in copying invariably from nature, even when a pin was the object. The ordinary, or even commonplace objects selected afforded great facilities for carrying this golden rule into effect, as his first essays, and some of them were excellent, generally embodied the heads of hounds, asses, and other domestic animals. Subsequently, as a boy or lad, he frequented Exeter'Change in order to study the features and manners of the lions, but, as a child, his aim was less ambitious, and it is interesting to note that he etched one of his own productions, the head of an ass, when only eight years old, thus outstripping in prematurity his great parallel, Lucas van Leyden,

who etched designs of his when nine years old. About the same period Edwin Landseer painted a terrier with a rat in his mouth, which was sold for what was then esteemed the magnificent price of sixty-eight guineas, but which would now secure treble that amount. Even when still a boy, and when scarcely recognised as having attained the full stature of an artist, his prolificness was extraordinary, and copious catalogues have been made out ranging from a stag's head to dogs and rabbits, which must have been painted when he was about twelve. The number of pictures of almost priceless value, which he perfected with a facility peculiar to himself, are so far explained by his extreme rapidity of execution acquired by severe study, incessant practice, and the sameness of the subjects embraced. The brief time consumed in the production of his works has been exemplified by his having completed a full-length portrait of a noble lord at a single sitting, and a characteristic group of some of his favourites within the time of morning church service. It is likewise probable that his training under Haydon, who instructed him not only in the physiognomical peculiarities but in the anatomical structure, and consequently in the movements of the objects of his study, may have contributed largely to the celerity with which he committed his conceptions to canvas. Having first secured much admiration for his representation of a St. Bernard dog, he became an exhibitor in the Academy when thirteen years old, and from this time throughout his life his works appeared in rapid succession on the same walls, or on those of the British Institution. The efforts first exhibited were pictures of a mule and a dog, and at once attracted attention, or rather commanded the admiration of competent judges. But not only was the public taste appealed to in these galleries, but multitudes of his productions were sold and circulated to connoisseurs and patrons ever rising in rank and affluence, and ever offering rewards, in his modest and uninstructed eyes often excessive, but ever in their increasing magnitude keeping pace with his fame and the fertility of his genius. But his reputation was widened by the distribution of engravings of his performances, inserted in sporting and other magazines, among classes which otherwise might have been excluded from becoming acquainted with his triumphs in a popular department of art. To the ability of his brother (who likewise possesses the merit of introducing to Englishmen the works of Rosa Bonheur) in engraving many of his finest pieces he was indebted for the almost universal knowledge of his performances; for it should be remembered that even to the present day vast numbers of our countrymen have never seen even

a drawing by Sir Edwin Landseer, but are familiar with "Bolton Abbey" and similar plates. It would appear that at a certain stage of his career a cloud passed over the sunshine which seemed to surround the most trivial display of his powers, by his failure in certain portraits, and his attempt to diverge into genre objects by the introduction, for instance, of a hat and gloves into a composition more congenial with his recognised style and taste; an attempt which originated a violent controversy. But this dispute aided rather than arrested the current of general approbation, and he is found, even as a youth, adventuring upon large pictures and producing lions and animals of similar proportions. Contemporaneously appeared from his hand the Larder Invaded, for which he received from the directors of the British Institution the premium of £150; the Catspaw, with an estimated value of £3,000; the Prize Calf, calculated at £1,890; and of Two Dogs, which rose in price from £300 to £2,415. We have traced this original genius almost from birth to the most eventful and brilliant period of his career: it would be tautological and tiresome to enumerate here the description, even the names of those works which rose under his hand, rendering his name a household word, and his creations, shrines, in almost every hall and hut in the kingdom. In the first stages of advancement the subjects chosen were almost exclusively domestic animals placed in familiar circumstances. To a citizen almost imprisoned in London such a choice was natural, but his feelings drew him in the same direction. He not merely admired animals and studied their ways and character, but he loved them intensely. They were to him companions, intimates, relatives, and by that sympathy and reciprocity of affection which establishes a sort of kinship and understanding between the two species, the tie of love and confidence seems to have been mutual. So that from the almost historic Brutus to the veriest mongrel which he has committed to canvas it is evident that Edwin Landseer was not merely the painter, but the deity of the animal. Further, it has to be remarked that his success and fame were built up on his exquisite representations of their humbler models, and that he became an Academician, a celebrity, in virtue of such pictures as the Catspaw, rather than of the development of his abilities in what may be esteemed the highest range of his imagination. This flight occurred subsequent to a visit to Abbotsford where, as has been said, he was sure to get on well with "the author of Waverley, and the Doggies." His beautiful preservation of "Maida," so intimately connected with the writings and private life of Sir Walter Scott, may be held as the commencement of his new or romantic style of painting, in which stags and

hounds, deer-stalking, the wild scenery amid which the game is pursued, and the animating incidents which attend the life, the manners, the death of the king of the forest, and of all the other kinds of game in the Highlands, take the place formerly engrossed by curs of low degree. As works marking this epoch may be mentioned the *King of the Glen*, the *Chief's Return from Deerstalking*, the *Challenge*. The scene where a deer and a hound are precipitated over a cliff, the latter being saved by an aged stalker. This view rises almost into the region of historical painting, the drawing is dramatic and reveals a romance as well as a glimpse of the mountain and the flood and their inhabitants. While of independent mien and moral bearing, Sir Edwin Landseer stood in a peculiar relation to his father, who for a long period acted as his guide and guardian and factor, not merely acting for him, but in many circumstances apparently thinking for him. They loved each other, but the son evidently regarded his parent with awe and diffidence, and, although reluctant to separate from him, must have lived in a kind of subjection or tutelage. Ultimately he formed a distinct establishment more ample and suitable than the obscure corner to which he had formerly been confined. He there saw and entertained his friends, formed new connections and attachments, and greatly enlarged his circle of acquaintances, both within and beyond professional limits; but of his intercourse under his own roof it is not our object to speak, nor is it necessary to say more of his mingling with general society, than that his worldwide fame, his elegant person and manners, as well as his amiable disposition, brought him into contact and personal friendship with the highest and noblest in the land, with those who were gifted with lofty position and bearing, with knowledge, or wisdom, or virtue. At many points his association with the upper and polished ranks might afford illustrations suitable to our present purpose, but we shall be content with one, as it affords a curious proof both of manual dexterity and what may be called duality of will and constructive power. While present in an evening party of the upper ten thousand an idle observation was hazarded by an empty-minded lady of distinction as to the impossibility of doing two things at once, he accepted the remark as a challenge, when he said, "Oh, I can do that; lend me two pencils and I will show you." The pencils were got, a piece of paper was laid on the table, and Sir Edwin, a pencil in each hand, drew, simultaneously and without hesitation, with one hand the profile of a stag's head and all its antlers complete, and with the other the perfect profile of a horse's head. Both drawings were full of energy and spirit, and although, as the occasion compelled, they were not finished

sketches, they were, together and individually, quite as good as even the master himself was accustomed to produce by one at a time, and with his right hand alone; the drawing by the left hand was not inferior to that by the right hand. We have all been apprised by popular rumour that Sir Edwin Landseer died of one of the neuroses, and details are not wanting of the progress of the calamity; but the precise signs or symptoms of the decadence and of the sad end have, we think, with commendable feeling and delicacy been withheld; and a veil has been drawn between the gradual culmination and the public gaze. Imitating the course adopted by his biographers and adopting their words, we shall now close this psychological sketch. "A Kind Star illustrated a Highland superstition, but in such a manner as proved that the designer's mind was not in its usual fine tone when this work was conceived. The superstition is that hinds are under the protection of beneficent stars: a hind lies dying on the banks of the lake. So far nothing could be said; but the introduction of a spirit with a star in its hair to bend over the poor beast was of quite another order of invention. The production of this idea was the first decided sign of decay in the powers of our artist. Those who owed him so much delight for so many years past stood aghast before it. Some of these tried to ascribe its exhibition, and even its production, to obedience to some unfrequent impulse—deference to some inferior mind, subservience to some vulgar taste. However this might be, there, unfortunately, it was."

"So far the critic and the writer see no reason for changing their opinion of this masterpiece of Sir Edwin's (*Flood in the Highlands*). If it was not his finest work it was at any rate his culminating one; he painted none which was nearly so good afterwards—indeed, even before this picture was finished, the painter, always a man of nervous susceptibility, had hints of no mistakable kind that the human mind and the body which surrounded it are mortal. He was constitutionally subject to nervous depression, but these attacks had accumulated force as years went on with him, and threatened the end which came at last with all its painfulness. We remember him during the painting of this picture, especially on the Tuesday before it was sent to the Academy—he was then putting a few last touches on the huge canvas. He looked as if about to become an old man, although his years by no means justified the fact. It was not that he had lost activity, or that his form had shrunk, for he moved as firmly and swiftly as ever; indeed, he was rather demonstrative in this matter, stepping on and off the platform in his studio with needless display, and his form was stout and well filled. Nevertheless, without seeming to be overworked, he did not look robust, and he had

a nervous manner remarkable in so distinguished a man, one who was by no means unconscious of himself, and yet, to those he liked, full of kindness and genial in an unusual degree. Even in 1867 there was little outward change, although not long after that date the attacks occurred with fewer and briefer intervals. These intervals caused the reports which flew about in the terms, 'Sir Edwin is better,' 'much better,' as some would have, and, anon, 'much worse,' as many said."

"The closing years of Sir Edwin's long, otherwise not unhappy, and generally laborious life, were darkened in the manner we have already indicated rather than described. He died on the morning of October 1, 1873, and was buried in St. Paul's, with honours, on the 11th of the same month."

A friend has reported to us that when visiting this great animal painter he found him on his death-bed, supported by pillows, but as busily engaged and interested as a tremulous hand permitted in drawing. The subject purported to be "The Death of the Prince Consort," but, "the ruling passion strong in death," he devoted his last touches to a dog which was to form one of the sad group. We do not know whether this expiring effort was ever finished, nor in what state it remained if unfinished.*

GEORGE MORLAND. 1763—1804.

Is there such a disease as moral insanity? It has been sought for and promptly found in those whose crimes are so sanguinary and monstrous as to exceed the credence and conception of even the deeply erring and evil. It has been found where aimless untruthfulness and dishonesty impart a colouring of mendacity and insincerity to every act, so that it becomes doubtful alike to the actor and others whether he has been actuated by ordinary motives or moral obliquity. It has been detected as the origin of innate flagitiousness, dissoluteness, and degradation which are inconsistent with the sense, the sentiments, and interests of the perpetrator; it has been shown in petty peccadilloes, in absurd or detectable thefts, in offences so minute and so contrary to all the surroundings of the offender as to create a suspicion either of practical joking or of contemptible chicanery. But this tendency has not been suspected where it forms an element either in the commonplace characters which form the great mass of the community where it may influence, without detection, the conduct, nor has it been identified when, in rarer cases, it has been associated with great

* *Memoirs of Sir Edwin Landseer.* By F. G. Stephens, 1874.

mental power or imagination or elevated feelings, nor generally, except where there is, in addition, present some unequivocal indication of moral or mental perversion. It is not here agitated as to that amount of moral feebleness or peculiarity which would condemn an individual in a court of justice or to protracted seclusion to an asylum, but exclusively to those degrees or forms of such an infirmity as may be mistaken for mere human corruption, may be branded or pitied as vice, and where they dim, but do not altogether obscure, the healthier emotions or qualities, or the intellect or imagination. These remarks exclusively apply to morbidity of the moral sense and conscience, and to such imperfection or impairment of the will as to render both the warnings of conscience and the suggestions of reason ineffectual. Even the confessional might fail in laying bare those courses of conduct which are attributable to such a disease, or to distinguish them from those which are the result of deliberate delinquency; but when we can trace to the very fountain-head the polluted stream; when we can follow throughout a long, and what might have been a prosperous and distinguished, career, an incessant, what may be called a consistent, preference for what is vile and vicious, and vulgar pursuits utterly incompatible with the higher nature of the individual associates who might minister to the vanity, the appetites, or the necessities, but who could scarcely appreciate the powers of their companion; and when we find the close of these scenes the wild delirium of dissipation, and death in a pot-house, we cannot refrain from extending sympathy rather than condemnation to the victim of brutal and fatal propensities. The subject of this memoir affords evidence of a combination of gross livelong immorality with marked though limited genius, of a correspondence between the habits and taste of the painter and the subjects of his pencil; and it is highly probable of a mutual reaction between these two factors of his character. He was the son of a painter of some talent, who, it is surmised, was a selfish taskmaster, who attempted to curb the inclination of his child for painting, removed him from the Academy of which he was a pupil, and all legitimate sources of improvement, in order to confine his exertions to his own department, and to augment his own gains. Whenever his apprenticeship terminated he emancipated himself from the slavery which it had imposed, and gave full scope to his own tendencies by becoming a painter of animals. Although, like Rosa Bonheur, he was partial to the horse, his greatest efforts were expended upon dogs, donkeys, and, alas! upon pigs. The interior of their dwellings, likewise, were favourite objects of representation. His sheer mannerism, and perhaps his happiest efforts, were confined to sketches of

pollard oaks or other rugged trees which had, in his eyes, a picturesque aspect. His fertility and facility in the reproduction of his favourite scenes was such as to have given rise to the extravagant calculation that he had executed four thousand pictures. This estimate may have been countenanced by the constant almost insatiable demand for his paintings, and by the innumerable imitations appearing in the market which the peculiar sameness of his style and the iteration of the stunted or pollarded tree rendered so easy and truthlike. He worked faithfully, but so often in order to meet the orders of those who had advanced him money, that his labour was the result rather of compulsion and necessity than of the promptings of imagination. This drudgery and dependence may have contributed to debase and soil a disposition not, perhaps, originally of a noble type, although it is affirmed that he was heir to a baronetcy which lack of means or ambition prevented him from claiming; and further that the sordid and selfish associates with whom he was brought into contact, and his exclusion from all the refinements and redeeming influences of pure society must have corrupted whatever capacity for elevation originally existed in his nature. This is, however, merely humane speculation, for, coeval with our knowledge of the man, or rather of the boy, he seems to have become the victim of every form of dissipation and defilement; to have chosen as his intimate associates jockeys, hostlers, prize-fighters; to have lived in constant fear of arrest from the exacting and heartless dealers to whom he had become indebted, or rather to whom he had pledged the offspring of his imagination. He seems to have been a sot and a stupid when intoxicated, unlike poor Sherwin, the engraver, who is described as mad with drink, and exhibiting his exhilaration in uproariousness, and by discharging pistols from the windows. The market, indeed, which these brain-suckers could command is said to have been enormous, that immense numbers of imitations were manufactured in order to meet the demand; so that there may be not only an exaggeration of his prolificness, but his memory may be burdened with the defects and blemishes of those who took advantage of his reputation. There is no relief to this sad narration; no family tie; no helping friend; no period of busy industry; no quiet repose in declining years in a home consecrated by time or kindly offices; no falling asleep gently and recliningly at the close. There is an uninterrupted course of debauchery, wretchedness, and squalor, until ruined in health, in purse, even in the productiveness of his art, he at last died at the early age of forty-two in a sponging-house. So far unhonoured and unsung,

that while the man is utterly forgotten, his works are still valued and valuable.*

THE CAT RAPHAEL (GOTTFRIED KUND?) 19th Century.

To those who are conversant with the work of Forderé, or of more modern historiographers of the population inhabiting elevated or insalubrious regions, especially the grand mountain range in Central Europe, the appellation of Cretin, Cagot, &c. must be familiar. Even the writers of fiction and of popular tours have introduced members of this degraded and unfortunate class in order to impart to their narratives a piquant or philanthropical flavour. Except from observers in Switzerland, where this physico-psychical degeneration is endemic, and in France, we have as yet obtained but little information as to the etiology or precise phenomena of this extraordinary type of degradation. In certain localities large numbers of the poorer ranks are affected, although the affluent are not altogether exempted, and large numbers of the same family may be implicated, but when a whole generation is affected by the scourge, it becomes extinct. The malady is manifested in various degrees of intensity, is occasionally limited to bodily deformity and infirmity, or to mental hebetude and imbecility, but may involve both of these conditions. In districts where the affection is prevalent, is developed in an aggravated form, and renders the sufferer incapable of engaging in some occupation or means of self-support, hospitals, or lazar houses, have been provided where the diseased and debased invalids may obtain greater comfort than in their own sequestered and squalid homes, and may sleep out an existence which places them in very few and feeble relations with the external world or their fellow beings. It was at one time propounded that change of residence and general surroundings if accompanied by such means and measures, educational, medical, or otherwise, as were calculated to stimulate and develop the nervous system, while they promoted the growth, health, and strength of the body generally, would greatly alleviate, if they did not eradicate, the taint in the individual. This proposition was actually carried into effect, but proved from some cause or other very imperfectly successful. The attempt was probably suggested or encouraged by the display of certain capacities or dexterity in the higher order of Cretins, such as may be seen in simpletons, imbeciles, *faibles d'esprit*, or decided idiots. There may shine forth from the general and permanent gloom and inertness of the mind a single luminous

* Articles and Biographical Dictionaries, &c. *Art in England*, by Dutton Cook. 1869.

ray of intelligence which redeems the individual from utter degradation and places him to a certain extent in relation to human kind. Those who are thus partially endowed may become shepherds, hewers of wood, or drawers of water; even carpenters, although their art may be confined to the construction of a single article or portion of an article; but most frequently the solitary and limited taste or talent is directed to the fabrication of small and simple articles in metal and wood, such as parts of the watches of which Geneva was at one time the emporium, or of the marvellous toys and grotesque figures, the actual creators of which are unknown to the possessors. It is rare that this dexterity ascends above the cunning of the hand, rarer still into the regions of fancy or imagination; but there are a few exceptional examples of extreme cleverness and ability, and the subject of this paper may obviously be included in such a category. The accessible notices of his history and performances are fragmentary, and while authentic not authoritative; but, although even his name be somewhat doubtful, and the narrative of his proceedings after mingling with the outer world somewhat contradictory, the following facts may, we think, be relied upon:—

Gottfried Kund belonged to cretinoid family, and was of low type. He is described as “a queer roundabout manikin, with a large pyramidal head, thatched with long masses of hair, an oval face, small round eyes, widely separated, a short squat body with a vast paunch, resting upon dwarfish legs, which almost described semi-circles. His chin was globular, but unbearded; his thumbs and fingers were rounded knobs, and in front of his throat and pendulous over his breast hung a tumour of more life-like colour than his sallow cheeks. Neither this goitre or bronchocele, nor rachitis, is an invariable sign or concomitant of the physical deterioration, although the former is so frequent that glandular swellings have been observed in the lower animals. It is understood that Gottfried Kund was deaf as well as a dullard; he spoke little and inarticulately, and exhibited few manifestations even of natural language, except in connection with his favourite and famous pursuit. Yet to this decrepid and imperfect creature might be applied the epithet used by Dr. Johnson in speaking of Goldsmith, that he was “an inspired idiot”; that he possessed powers almost unrivalled or unequalled, but exercised in so narrow a circle as to betray their morbid origin. He loved and lived with and painted cats from the time he was a child until the time his memoir was written, when he was thirty years old. He drew thousands of these creatures; he scratched figures like theirs with flints upon the rocks and the ice, almost as soon as he could walk.

Whenever he knew the use of charcoal and chalk, he destroyed every wall and board with similar drawings; and when he got paper and colours he produced figures of the same animals almost without a lesson, and without any copy but the creatures whom he fed. He painted large cats and little cats, white cats and black cats, young ones and old ones, sitting, sleeping, climbing, leaping, fighting, and love-making, but nothing save cats. There were cats in sorrow and in anger, sensible cats and foolish cats, cats of character and imbecile cats, and even a cat with a goitre, but all bore a strong though faint resemblance to a typical cat, which was in all probability the first or the fairest individual which had arrested his early and plastic perception. These paintings were not mere imitations or caricatures in outline; they were portraits, resemblances depicting not merely the form, and feature, and attitude, but the physiognomy, expression, and moral attributes of the original. When observed perched at his rude easel and engaged in representing a cat at her ablutions, he looked so rarely at the animal sitting for the likeness, that it was fair to conclude he was calling up creations from memory and fancy, for it is no heresy to suppose that imagination may twinkle in the rudimentary mind somewhat in the same manner, and according to the same laws, that it enlightens, like sunrise, the wider realm of genius. While thus employed he was said to have grouped around him numbers of his favoured species of all sorts and sizes, not as lay figures or copies, but as friends who reciprocated his attachment. It has been believed, perhaps fancifully, that creatures possessing the higher instincts or propensities cling to human beings of the lower types, and prefer as their guides or guardians the weak to the strong, the imbecile to the intelligent. Under this law it may be, or under the relation where love engendereth love, did the tie between the Cat Raphael and his companions subsist. He not merely admired cats, but he loved them, associated with them, and seemed to regard them with more vivid sentiments than the men and women around.

That his portraits were not mere daubs, but lifelike and artistic representations, may be inferred from the general demand for such curiosities, and from the facts that they secured considerable prices, and that specimens are still to be found in the galleries of Dresden and elsewhere, and might, without derogation to the repute of rivals, be fairly attributed to the Flemish School. We are informed that he made occasional visits to Berne, in order to dispose of his productions, and that his great delight during these visits was to fraternise with the bears kept as living examples of the can-

tonal crest, in a pit on the ramparts, and that he sustained a sort of conversation with them by growling as they did. There are appendices to his history current, in whole or in part apocryphal it is suspected: 1st. That at some stage of his existence he was placed at school by some sympathetic admirer, either to rouse and stimulate his whole mind, or to stimulate his solitary talent; but that, disliking the discipline, he made his escape and concealed himself in the adjoining woods; 2ndly. That he was placed under the care and patronage, or surreptitiously appropriated by the cunning, of some one in Berne, who profited by his works, but maltreated or neglected him. It is surmised that he died in that town.

JOSEPH MALLORD WILLIAM TURNER. 1775-1851.

THERE are before me six memoirs of this extraordinary man. The biographers seem to have been perfectly competent to judge of the painter's works, are all enthusiastic admirers of his genius; yet the wide difference, the absolute discrepancy, betrayed in their mode of treating the subject, and in the impressions conveyed as to his life and character are, I think, without parallel in the whole field of literature. In one narrative, which may appropriately be designated as colourless, Turner is treated as the author of a series of magnificent paintings in oil, water-colours &c., but there is not a single allusion to those peculiarities which separated him from ordinary men and even from the most erratic and extravagant of his brother artists. Another, while fully appreciating his marvellous imagination, his mastery over the secrets of colour and form, the artistic mind which worked through and by the hand, gives a prominence to eccentricities and absurdities which, when unrelieved, is deceptious and revolting. A third, utterly perplexed by the inconsistencies of his manners and mode of life, and foiled in reconciling the grandeur and glory of the conceptions of his fancy with the pettiness, paltriness, degradation, and moral incompatibilities of the man, has recourse to what he designates a dualism of character which, though utterly inexplicable according to the recognised laws of the human mind, imparted an individualism or personality to this mixed and mongrel being, this hybrid between misery and meanness and lofty aspirations. A fourth, attempting to hold the scales of justice with a steady and equable hand, presents the two sides, or rather the many sides and multiform aspects of his hero in parallel sketches, without any attempt to amalgamate and harmonise what are on the surface such heterogeneous qualities. But startled, it may be discouraged, by his failure to give a unity

of design to his portrait, he appears to have obtained a glimmering or suspicion of the real truth. One of these writers has produced the following opinion, which will be regarded as an eloquent criticism, or as a mere laudatory rhapsody, according to the opinions of the reader.

“Glorious in conception, unfathomable in knowledge, solitary in power, with the elements waiting upon his will, and the night and morning obedient to his call, sent as a Prophet of God to reveal to men the mysteries of the universe, standing like the great angel of the Apocalypse, clothed with a cloud, and with a rainbow upon his head, and with the sun and stars given into his hand.” Parenthetically, Turner’s own comment upon these laudations was: “Ruskin knows a great deal more about my pictures than I do; he puts things into my head and points out meanings in them that I never intended.” A second says, “Stumpy, slovenly, lame, often not over-clean in dress, awkward and unconciliatory in habits, diabolical in looks, and suspicious of pseudo friends, greedy relations, selfish legacy hunters, and concealed enemies, he had not the manner of one who either could or cared to win the favour of the general world.” And, as another observer says, “His reasoning faculty was less than human.” A fourth affirms, “In all business transactions he was, as a rule, ungenerous, and sometimes dishonest;” and it is well-established that he often acted in the spirit of a petty tradesman, and with distrust of the wondering world expressed in the words “cheat the geese.” Yet all these were eulogists, critics, worshippers of this puzzling but self-sacrificing saint in the hagiology of art. Were it necessary to pass over to the antagonists and detractors of Turner, to the unscrupulous critics “who saw nothing in his representations of earth and ocean but soapsuds and whitewash”—although the enthusiast had, in imitation of a great prototype, caused himself to be lashed to the mast of a boat during a storm, in order to watch and make himself master of the real features of the weltering waves and tempest winds; who laughed to scorn his fleet of boats, pursuing different courses in the same breeze, or ridiculed his mistakes in placing the sun and moon in impossible juxtaposition, the same perplexity of analysis may be detected. In fact, friends and foes alike failed to discover the key to the mystery, to apply the true solvent to that compound of crudities and jewels which constituted the nature of the man with whom they were dealing. That key and solvent are to be found in unhealth and unsoundness of mind pervading his whole career, but becoming more prominent and palpable at certain periods and under certain influences.

Joseph Mallord William Turner was the son of a barber, of narrow means and narrower mind, who is said never to have com-

mended his child, except for the saving or hoarding of a half-penny; and of a mother of fierce temper and passions, which ripened into maniacal fury, necessitating her confinement in Bethlehem Hospital. He seems never to have been a boy, and we hear little of the pranks of merry mischief-making childhood, or of the precocity which foreshadows fame. He was either never at school or was so imperfectly taught that he grew up a waif and a starveling, not merely in all kinds of knowledge, save one, but in the everyday acquirements of even the uneducated. He could never spell, but his defective orthography was equalled by that of President West. He could rarely write lucidly, or even intelligibly, in his own language; and it is affirmed, that although many of the clauses of his last testament were reversed upon public grounds or because they were impracticable, other provisions were passed over or negatived because the terms of the bequest were incomprehensible. His early home was, if not poverty-stricken or positively sordid, as may be apprehended, very humble; but in one of its apartments he contrived to immure himself in order to prosecute his favourite occupations, refusing access to all applicants, and concealing the work upon which he was engaged; thus, at a very early age, displaying the love of seclusion, the suspicion and secretiveness, which, with slight modifications, marked his whole life and even his death. He was observed when young to trace figures with his finger on a wet tea tray. This incident and a drawing attempted when nine years old, probably suggested to his parent whatever subsequent direction may have been given to the lad's pursuits and the choice of that style of training which he actually underwent. At once unselfish and discriminating, the father taught the boy reading, but not writing; sent him to school for a brief period; devoted a legacy which had been bequeathed to him in order to secure the instructions of a trustworthy architect, instead of placing the boy under the tuition of another, who had offered to take him gratuitously. It would appear that shortly afterwards, but not until the pupil had imbibed that taste for architectural drawing which long influenced his productions, he is found in the school of a floral drawing master, then under a perspective draughtsman, then as a member of a drawing school, and ultimately affiliated with the Academy. In all likelihood, however, the most efficient cultivation and growth of his powers were the outcome of his spontaneous efforts in his garret, where he threw off drawings, which, whatever might be their demerits, were exposed for sale in the windows of his father and others, found ready and numerous purchasers, and contributed, it may be, the nucleus of that vast accumulation of property, it cannot be called wealth as he never enjoyed it, or even expended it; but by which

he vainly proposed to immortalise his name, his individual distinction, and the importance of his art. While improving his manual dexterity in his secret studies, and in the curious manipulation of lines, scratches, and blots, which are asserted to be the legerdemain of his art, it may be believed that his love, his admiration of external nature, contracted and cherished, as it at first was by rambles in the purlieus of the Metropolis, promoted and perfected the education of his imagination more than any other agency, although the companionship with the pure and the beautiful was at all times greatly disfigured by the carnal and corrupt elements of his nature. Many of his glimpses into the phenomena and beauty of the external world were obtained incidentally while in prosecution of his favourite, all but fanatical, partiality for angling. In fishing he was an adept, and although provided with the rudest of trouting gear, as much of a zealot as Izaak Walton. To the gratification of this passion may be attributed his fine series of landscapes, "The Rivers of England." But streams and ripples and pools and reaches, and romantic scenes, were not needed to minister to his indulgence, for he is depicted as seated during a whole day on the margin of a pond, under an umbrella to protect himself from the rain, which descended in torrents, with his feet upon a board for further protection, perseveringly devoted to the capture of wretched perch and carp. But with advancing years these opportunities of developing and cultivating his powers were greatly increased by pilgrimages to Scotland, France, and Italy, really in search of the picturesque, from which he gathered at once copious contents of portfolios, to be utilised and retouched in the future; but likewise that familiarity with the lights and shadows, with the forms and aspects of the countries through which he passed, which ultimately became one of the many characteristics of his art. A popular opinion has prevailed that Turner possessed intuitively, or acquired, a special capacity for penetrating into the secrets of nature; that the results of this intuition were discoveries, and that his marvellous management of the effects of contrasted colours, and his production from the slightest and least promising materials signal and novel features even in commonplace objects, should be traced to a gift, an innate talent, and not to the real sources of his success, the true and correct perception of which he saw, and the idealisation of what he felt: of the impressions, in short, imparted to his imagination. To the stimulation and exaltation of this single faculty all his energies were incessantly directed, and all his acts, arrangements, ambitions contributed, to the exclusion of other and ennobling emotions, sentiments, and trains of thought. This mono-idealism, this worship of the Sun-God or of his

rays shed upon the earth, animated him, not merely when among the mountains of Switzerland or in his studio when consigning the outlines and effulgence of these mountains and their corresponding lakes to his canvas, but in his everyday life when contemplating a modern mansion or mausoleum, and survived all other considerations and ties. On the very verge of death his choice of a dwelling fell upon a shabby cottage so situate that it commanded a view of the sunlight on a river, and so constructed that from its flat roof he could witness, and did witness, until his eyes closed in darkness, the glories of sunrise. It is remarkable when the intensity and elevation of his admiration of nature in her grandest features and attitudes is analysed that it did not pass into adoration, and that the devotee did not create for himself, a faith, a religion, a worship. But that he never reached even to Paganism may become explicable when it is understood that he seems to have remained ignorant of the laws and revelations of God, of the dictates and duties of even worldly morality, and of the higher, the happier, and holier instincts, supports, and aspirations of the human heart.

The most propitious event in his youth was his pupilage or association with Sir Joshua Reynolds, to whom he was much indebted for the practical details of a high and attractive style of painting; but deeper and more inspiring impressions were imparted by his study of works by Vanderveldt and Claude, and of water-colour drawings by English Masters, with whose modes of execution and successful achievements he maintained, it is affirmed, a prolonged and imaginary warfare in competition or in imitation, or in fathoming the depths of their dexterities and beauties. Of his proceedings as a student in the Academy we know little, but in manhood and in old age, and perhaps in youth, it was his only source of happiness, his home, his altar, where he sacrificed his life, his love, his labours; whose members were, with one exception, Lord Egremont, his only familiars and friends; and the dinners and lunches there accessible were the only means of hospitality which he prized or enjoyed. It may be surmised that these festivities proved a snare to an individual who shut himself out of society, who was by nature and training solitary; who is described as hiding himself because he could not mingle with his fellow men on terms of equality; who could not converse and spoke only by his brush; and ministered to a craving for stimulants originating elsewhere, but indulged in and encouraged as a mere coarse propensity, or as a stimulus to prompt or rouse his flagging or fatigued imagination. It is told that during his daily and long-protracted routine of painting in his gallery, he kept beside him and so far depended upon a bottle of sherry, the filth and ugliness of which disgusted his visitors more than the

pernicious effects of its contents. It is likewise told that when going to sea with fishermen in order to note the features and caprices of the waves and clouds, for he was indeed a "cloud-compeller" as well as a Pantheist, he carried with him a flask of gin, that he might see or feel under an excited nervous system. A cloud of witnesses, moreover, deposed that even upon what are called varnishing days in the Academy he was visibly under the effects of wine, and often kept a decanter of sherry while engaged in correcting or improving his pictures, or when, as often occurred, commencing and completing a production already hung on the walls of this Pantheon, although only in outline, and lastly, in remodelling or retinting a finished work in order to counteract, or when in an amicable humour, to enhance, the effects of the surrounding specimens of art exhibited. Towards the meridian and evening of life this destructive habit with the debasing concomitants with which it is invariably accompanied, obtained a mastery over prudence, sound taste, and whatever principle may have from time to time influenced his contracted mind and conscience, which have been rashly pronounced by an analyst as "less than human;" for when his weekly toil, or what was to him his delightful pursuit, was brought to a close on Saturday, he thrust a five-pound note into his pocket, rushed to some of his vile or vicious haunts in Wapping or Rotherhithe, and there wallowed in mad or maudlin gratification until summoned by his better genius to exercise his heaven-born gifts. These repulsive narratives are not given that the Bacchanalian may be condemned or moralised over, but as symptoms of disease, as indications of brutal appetites, which could not be controlled, and which simultaneously betrayed and fostered that lack of self-control, intellectual resource, and native dignity, which may be detected in almost all his manifestations unconnected with his professional instincts and faculties. But the Academy conferred upon him greater benefits and advantages, if such they were, than consociation and conviviality. It was to him a palatial residence, enriched and ornamented with what he regarded as the most beautiful and precious objects in the world. To one whose paternal home was obscure, penurious, and unsuggestive, and whose nominal residence in St. Anne Street was a dark, dingy, dirty, and fourth-rate workshop, undusted and unwashed for years, and presenting, except on the walls of the picture gallery, unpleasant evidence of neglect, desertion, and dilapidation, the large and lofty and cheerful saloons of the Academy must have proved cheering, even exhilarating. Yet in this dark and dingy den, as it has been called, were afforded traces of redeeming qualities; occasionally a beggar was spasmodi-

cally relieved, on its portal lay a pampered pet cat, and in one of the deserted rooms, furnished from a pawnbroker's, was a large menagerie of cats protesting in favour of his reputed love of animals. This temple of art, the Academy, must have served to him as a club, as the chief point at which he came into contact with his fellowmen, as a school for thought and information, yet he was deplorably ignorant on common topics; but neither here nor in his studio, where he laboured incessantly and promptly, but where he was never seen at work, manifesting little or no preparatory cogitation, nor the restlessness or indecision of incubation; could he be said to have lived. In fact his most prized allies had no conception of his exact abode, and at last he disappeared altogether, literally leaving and taking precautions that he should not leave a trace behind, and was accidentally discovered on his death-bed. His absence was not caused by the pursuit of either art or amusement. It may have been connected with certain of his immoralities, but to us it appears as a sign of that morbid self-absorption and secretiveness which marked and marred his whole career. His preference of solitude, his coldness and repulsiveness even to his peers, his self-negation merge, at least, upon one occasion when in the spirit of mental masquerading he concealed his identity and resorted to impersonation, by repeatedly representing himself to the same person as a Master in Chancery. But in addition to intercourse with kindred spirits he owed to the Academy all the insight into literature which he ever obtained. His intimates are confident that he never read any other book closely and carefully than Ovid's *Metamorphoses*, that from this source flowed many of his inspirations; but to the Catalogues of the Annual Exhibition have been referred both the subjects and the titles of many of his productions, and to the scraps of poetry by Pope &c. which their pages contain have his acquaintance with works of imagination been limited, while with them have many of the passages of his own absurd, or rather grotesque poem of the "Fallacies of Hope" been identified. But although this effort of one who has been distinguished as the "dumb poet," as being able "to think only with his eyes," as well as other writings, exhibits great ignorance of his own language, he is reported to have attempted a speech; to have enjoyed animated and controversial discussion, when confined to art or collateral matters; even the prattle of children, of whose presence and manners he was tolerant, if not positively fond; in strange contradiction to his repulsion and rudeness towards all except those belonging to his own specialty, and even to relatives, whom, however, he may have suspected of sinister and greedy expectations. His feelings were at all times roused by appeals to pecuniary considerations recalling the economy and penurious-

ness which may have been at some time imperative, but which was undoubtedly an hereditary moral taint. Instances are met with in his transactions of his squabbling over a few shillings, the price of a packing-box, at the very time he was accepting the liberal, perhaps lavish price of one of his pictures. One of his associates, more disposed to sneer than to compassionate, gave as an example of his generosity, that Turner upon one occasion paid the half-penny toll at Waterloo Bridge for him. Were this tale and its obvious inferences substantiated, it might be counterbalanced by many anecdotes of self-denial and kindness, chiefly to associates, and especially in rendering manual or mechanical advice or assistance in the completion and hanging of their paintings. It is not necessary here to deal with his discharge of the bills of symposia or orgies with his fraternity, as it might find an explanation in the excitement by wine; but we are called upon to mention his splendid donations of £20,000 and £5,000 to friends or patrons whose resources were at the time exhausted, and of £300 to an individual who had explained to him the mysteries of the Daguerrotype. It must be confessed that these acts have been doubted, or where admitted they have been denounced as loans, as investments, where there was a certainty of repayment, if not of gain. But even recognising these transactions as emanations of gratitude, it is suspected that they may have been dictated by that combined meanness and munificence, which has been detected in diseased and contracted minds where a momentary, perhaps a sinister impulse, may override or overturn the habits and motives which regulate conduct, even in rejecting the tributes and triumphs offered to his genius. When he received two offers of £100,000 for his works hoarded in Queen Anne Street and £5,000 for his two pictures of Carthage; and above all, when he was waited upon by Mr. Griffiths on behalf of a distinguished committee, among whom were Sir Robert Peel, Lord Hardinge, &c., with an unconditional offer for the purchase of his whole collection on behalf of the nation; while it is possible that his prompt rejection was connected with his cherished projects of erecting a retreat for decayed and disabled members of his own guild, and of erecting a monument for himself in St. Paul's, we can likewise see in it that appetite for hoarding, that tendency to keep whatever has belonged to the individual, whatever has been made, touched, or coveted by him, displayed by many lunatics and by many others who are not insane. It is narrated that he disputed with a shopman in order to repossess himself of a scrap of paper which had been attached to one of his parcels.

Mr. Tremblay, the flower painter, for example, who died a few months ago, who lived in a needy condition, and was sup-

posed to be poverty-stricken, was found on his death to be in possession of a trunk which was filled to the brim with gold coins, chiefly of the reigns of Napoleon I. and Louis XVIII., but, as a numismatic collector, would have undergone the severest privations rather than part with one of his treasures. In like manner Turner felt the pang of a parent parting with a child on disposing of a picture, declined to sell many, bought back others, and although he has been accused of raising the price of those exposed to auction by proxy bidders, it may be surmised that his object was to enhance his reputation, or even to defeat an appreciating customer. It is certain that his retention of so many household gods around him cannot have been for the purpose of admiring them, as very many stood with their backs to the light in his gallery and covered with the accumulated dust of scores of years. Indeed, so prolific was his imagination and powers of production that it cannot be believed his Polytheism extended in memory even to a portion of the objects of his solicitude and worship, as in twenty years alone, eighty of his pictures were exhibited in the Academy, and, in the same time, 500 engravings were published from his drawings. It has been the fashion with the followers and partisans of this great leader to express sympathy with him as an unfortunate, disappointed, ill-used man. With this estimate I cannot agree, as, apart from the possible hardships of his youth, his own misdoings and misadventures, his unfruitful love passages, which are purely conjectural, and the non-recognition of his claims to the Presidential Chair of the Academy, which, however, it is confessed that he was both by mind and manners ill-fitted to occupy; there is little to mourn over in his lot. He was in truth eminently favoured, and fortunate, and successful; he created surroundings in keeping with his tastes and tendencies. He was the idol of all who could appreciate his powers, even of those whom he shunned, repelled, and insulted. He accumulated the enormous sum of £140,000 in cash, apart from the value of his property in pictures, and he had attained to the very pinnacle of human fame and glory. His decline both in the exercise of his talents and in his frame and health was gradual and palpable to the few with whom he latterly came into contact. He disappeared for months, supposed to have become more and more addicted to stimulants, and died in an obscure suburb under the pseudonyme of Admiral or Puggy Booth, conferred by the *gamins* of the street, but not repudiated by himself.

(Authors consulted: *Monkhouse, Thornbury, Hamerton, &c. &c.*)

ART. III.—THE CURABILITY OF INSANITY.

PSYCHOLOGICAL SHADOWS.

BY W. A. F. BROWNE, LL.D., formerly Medical Commissioner in Lunacy, Scotland.

“The earth hath bubbles, as the water has,
And these are of them.”

WHEN visiting a country hospital a few years ago, I encountered several individuals in the avenue who bore on their features traces and tinges of disease of some kind. It was the day of dismissal. Each of these discharged patients had in his hand a ticket inscribed with his name, the nature of his malady, the result, and so on. One of these persons, aged 45, but looking older, allowed me to inspect his manumission, on which were written the words, among others, “Bronchitis, recovered.” The card of another was marked “Intermittent fever, recovered.” That of a third, who hobbled along on an artificial leg, or, rather, on what was then called a tree-leg, signified that he had laboured under strumous degeneration of the knee-joint. I put no questions to the exeunts, but was content with the sad, though perplexing history which the MS. of each disclosed. The word “recovered” was modest, and expressed in one sense the bare truth; for I could not doubt for a moment that the seclusion of the sufferers in the hospital, the prudent diet and regimen and management there accessible, and the remedies and resources of art which had been resorted to, had, in different ways, promoted the recuperation of these patients, and enabled them to return to freedom, fresh air, their homes, and, under certain restrictions, their former occupations. But in what a vague, even contradictory, acceptation must the word “recovered” be received! Here is an elderly man, years having been subtracted from his allotted span, saved from his suffocating cough, saved from all cardiac and pulmonary changes which might have followed, by blisters, ipecacuanha, &c.; or, as the factors in such processes are multiple, by the mild and equable atmosphere by which he had been surrounded, and by protection from the low temperatures, the irregular habits, the want, perhaps the wickedness, which had provoked his affliction, and which will inevitably inflict a relapse should he expose himself to such causes or to his wallowing in the mire; and yet he was legitimately, according to prevailing opinions, discharged cured. Here is a second, who, having traversed the Fens of Lincolnshire, brought with him

the poison, as well as the local experience, which his Anglo-Saxon forefathers must have borne innocuously. This lad had already been prostrated by several attacks of ague, but he had now been so lavishly saturated with quinine that his shivers and sweats had disappeared, that he felt active and athletic, that he dreaded no lagoon nor variation in the heat, moisture, or other qualities of the air—which, however, if braved recklessly in his native county, would inevitably send him to hospital with intermittent fever; and yet he was discharged cured. The cripple was in all probability admitted to the surgical ward when emaciated, feverish, and worn out by excruciating pain or discharges from his diseased member, and when the necessities, even the loving kindness, of his humble home had been exhausted. It is certain that judicious care and kindness had soothed his sufferings, and that amputation had saved his life. He seemed to cherish some notion of this kind as he hobbled exultingly and, so far as his walking-stick permitted, jauntily along. But this man must from henceforth be nearly or altogether incapable of resuming his toil as a labourer, must be cast upon parochial relief; and yet, indigent, maimed, mutilated, the remaining portion of the man was discharged cured. There is every reason to feel confident that the treatment of these unfortunates had been judicious and successful; that the infirmary, its staff and their manipulations, were outcomes of benevolence, and merited all the gratitude and all the praise which those who benefited by such ministrations, as well as the Christian hearts which supplied the resources, could expect or desire. The episode is introduced not to condemn, but to award unqualified approbation, except in one particular—the total absence of any scientific basis, rule, or even the faintest attempt to classify the recoveries which could fairly be boasted of. Here is a victim to bronchitis, with some alteration of tissue or function which imparts a tendency to new, repeated, and, finally, fatal attacks of the same disease; here is a restored lad bearing in his system, in some inscrutable manner, a poison which needs but a breath of air to destroy health and to generate formidable or permanent maladies; and here is a sufferer whose life has been prolonged by deprivation of a limb, which renders him, if nothing more, a useless and helpless member of the community,—all being placed in the same category.

In considering the difficulty, perhaps the impossibility, of reducing such elements to a classification which would render them available for statistical or medical purposes, it occurred to me that the results in the department with which I have been connected for a lifetime were recorded in a still more loose, unprecise, and even conjectural mode than that now sketched:

indeed, the system pursued in asylums is still more emphatically to be repudiated; for while from hospitals the nature of the physical circumstances under which a patient is discharged is determined and declared by the medical attendant, who is alone entitled to pronounce such a verdict, this is not by any means the rule in all asylums. In one respect the decisions in both cases are open to the same objection—that there takes place an aggregation or slumping of diseases utterly discrepant in origin, form, and issue. Thus, while the cessation of ague and the loss of a limb are comprehended under the same designation, so are the terminations of mania, in all its varieties, of melancholia and dipsomania. It is quite obvious that, even when the mental condition, the fate, the future disposal of a lunatic are judged of by a medical expert, even by that expert who has guided and guarded his now sane charge through all the difficulties and dangers of a protracted paroxysm, there must be a thousand sources of fallacy, and that the conclusion as to the amount, or even the reality, of the convalescence may differ widely—nay, in many instances must differ widely—from that of other qualified experts. The first sources of fallacy may lurk in the medical judge's own mental and physical condition. He may be full of hope, he may be despondent, he may be ambitious or emulative of the success of others, he may be suffering from physical, hepatic or renal disease, and his estimate of the qualities and bearing of those around, whether sane or insane, may and do not merely take a colouring, but are intrinsically influenced—it may be vitiated—by his bodily affliction or idiosyncrasy. The view taken of the progress and prospects of a patient will likewise depend in great measure upon the standard of health, trustworthiness, or usefulness assumed by whosoever may determine the complete or partial removal of alienation. According to the confessions of certain well-trained and acute physicians, great embarrassment may be encountered in forming a judgment from the peculiar habits of thought and the modes of expression of the individual undergoing examination. This obstacle is greatly magnified when the patient employs the local and unfamiliar language or the rude (almost barbaric) dialects used in certain districts; and becomes almost insurmountable when the inquiry is directed to members of the Celtic population—when the inquisitor and the inmate think and speak in different tongues, and can become intelligible to each other only through the medium of an interpreter, whose testimony is perhaps as confused and perplexing as that of the lunatic. I have known a well-disposed medical superintendent, who entertained a great horror for the violence, restlessness, destructive tendencies, and loquacity of those under his charge, accept the

cessation of these manifestations of morbid activity as symptoms of incipient convalescence, if not of cure, and rest tranquilly upon the biblical picture, "Seated, clothed, and in his right mind." When to this self-satisfaction is added the vague and often rash expectancy that the amelioration initiated under treatment, or at all events during seclusion, may be promoted and secured under modified liberty, new and home influences, premature discharge may be explained if not justified. Upon such a theory, for it is little more, is founded the system of liberation on probation. In the opinion of many psychologists, such probation should be persevered in under the shelter and guidance and guardianship of a hospital; in fact, the entire duration of the residence of an individual in an institution for mental diseases is, subsequent to the more acute stages of disease, purely probationary, or tentative, or experimental. To those of timid, even to those of sensitive or sentimental character, the presence and co-mixture of persons only partially recovered from some form of mental derangement is alarming or repugnant, and excites somewhat of the same feeling which arises on the approach of a ticket-of-leave man. I have heard even those who were so far responsible for the legislative enactment under which this scheme was introduced confess grave doubts as to the expediency, even the legality, of such a procedure, and advocate the creation of succursal or convalescent establishments. In Scotland, where probationers chiefly abound, it would appear from the last report of the Commissioners in Lunacy that the experiment is not attended with triumphant results, as of 2,011 persons sent home on probation since 1862, 337 were again immured, within three months after liberation, in the asylum in which they had been originally confined; while the remainder—those who did not return, of whom nothing was afterwards heard, but who may have died, been transplanted into another hospital, or may have deteriorated into fatuity, or some of the more tractable forms of derangement—are blazoned forth in the catalogue of recoveries. But my interest is chiefly awakened as to the fate of that large number who were not officially registered as relapsed, and cannot be fully allayed until it be demonstrated whether they were restored to reason, were incarcerated at a subsequent period, or died, or remained demented but inoffensive and tractable, and, as it often happens, useful members of society. In any of these supposed cases the objects aimed at in any speculation as to the curability of mental diseases are utterly stultified. It seems that this means of relieving plethoric asylums has not, even north of the Tweed, reached that degree of popularity which was imagined, as the Commissioners, in the report and at the page quoted, mention only four asylums in which it is frequently resorted to, while in the remainder "it is seldom or never adopted."

Such vaticinations, for they are little else than hopeful conjectures, are sometimes founded upon accurate prognosis, often upon genuine benevolence, and may eventuate in that restoration which must be classed with the evidence of things not seen. But the step may be resolved upon under an erroneous interpretation of the mental condition of the subject. It may be dictated by a philosophical creed, by the notion that, if the intellect be clear and unclouded by delusions ; or, on the other hand, even should errors of judgment persist, if the emotions, the sentiments, the will, are apparently sound and self-regulating ; or, on another hand, even should there be observable less wisdom, less gentleness or self-control, should the passions or appetites have failed to dominate, or irresistibly to impel,—the portals of the prison-house are opened. Many judicious physicians, who have never analysed, even studied, the human mind in health, fail to grasp departures from its normal vigour and capacity, especially when the infirmity is, although significant, trivial and transitory, and confine their views to what is palpable and present, and, it may be, to indications afforded exclusively by the bodily condition. It is certain that, in many cases of general paralysis, recovery has been predicated and liberty granted in the lull which often succeeds the stage of excitement—when sufficient reticence can be exercised to effect the concealment of any glaring and incredible Utopian visions, and when there is an obvious deposit of flesh and fat, and other deceptive symptoms of recuperation—the sufferer inevitably returning to pass through the subsequent stages of his fatal malady ; but there is a more frequent and fertile source of error arising from that simulation of recovery presented during lucid intervals. This aspect of amendment is partly the result of genuine health, partly of that self-command possessed by many who are conscious of the conditions upon which their emancipation depends. There can be no doubt that the dismissal of individuals so affected is conceded in perfectly good faith, and may even become obligatory in consequence of their general deportment and the probability of future improvement. But when this issue is viewed broadly, and when thousands of individuals may be involved, the vitiation of all calculation as to the proportion of recoveries in the cloistered insane becomes painfully obvious. Every superintendent must see in his registers cases which have been removed once or twice, or oftener, during the year ; and I can recall one upright and distinguished member of our specialty who was found deploring the death of M. M. on the plea that for years her cure had been effected ten or a dozen times annually and thus enormously swelled the percentages. This course was pursued in all candour

and honesty not merely as that generally, if not universally, prevalent, but because the cure was perfect, if not permanent, and because the law required it. But, when we examine the annals of another country, where different customs and opinions have regulated the practice of physicians, we find that one person is recorded as having recovered 59 times in twenty-two years, that another became sane 33 times, a third 22 times, a fourth 10 times, 94 five times, and that 87 persons contributed 274 recoveries—an average of a fraction more than three to each person. We are somewhat staggered by the complexity and futility of any calculations based upon such premises. It should be noted that the difficulties thus created are so far explicable by the practice of treating such proportions as estimates on the number of cases and not of persons enumerated. But there are other and prolific means by which such scientific, though unintentional, exaggerations are committed. In one establishment it is stated that “the whole number of cases, of less than twelve months’ duration, admitted since the opening of the institution was 1,061. Of these cases, 697, or sixty-five and sixty-nine hundredths per cent. recovered. Of these 1,061 cases, 187 were readmissions: hence, the number of *persons* admitted was 874. Eighty-seven of these *persons* recovered 274 times, or 187 times more than the number of persons. These were duplicate or multiply recoveries. Subtracting these (187) from the total (697) recoveries, the remainder is 510 recoveries, and these are the recoveries of persons.” It is clear that when the absence of a lunatic from his school of training, the asylum, is brief—a mere vacation—as well as when his sanitary state is precarious and uncertain, such half recoveries, or quarter recoveries, should be relegated to that vague and meaningless limbo of removals under the term “improved” which figures so largely in certain statistical tables. But this subject presents other aspects. It has often happened that those who have laboured under delirium tremens and pseudo-dipsomania have, on the elimination of the alcoholic poisoning, been associated with those who have recovered from insanity. This is not so infinitesimal an element in such an investigation as might be imagined; for in Scotland, where, in anticipation of the provisions of the Habitual Drunkards Act, individuals were entitled, under what is called a voluntary clause in an Act of Parliament, to consign themselves to an asylum, and again to discharge themselves when so inclined, considerable numbers took advantage of this privilege. It may be charitably conceded that many such acts of self-denial were resorted to from a sincere anxiety to eradicate the morbid impulse and to avoid the temptations presented for its indul-

gence; but it is known that many of these inebriates adopted seclusion as the readiest refuge from bodily indisposition, or the social consequences of their errors, so that, when the malaise and the repentance had evaporated, they at once returned to the world and to their wallowing in the mire, but not until they had been honoured by a certificate of recovery. It has been averred that so numerous were the demands for admission under this clause, originally intended to facilitate the entrance of those trembling on the verge of madness and to avoid the painful ordeal of legal sanction, that medical superintendents, discovering the total inadequacy of such an arrangement to subdue an inveterate, if not an incurable, propensity, and recognising that the presence of even the most amiable of drunkards was a corrupting and contaminating element in the management of other patients, have, for some time, discouraged or discontinued the reception of such cases. It would be profitless to discuss, at this point, whether such affections can be legitimately classed with the neuroses or to question the validity of the opinion entertained by certain physicians as to the propriety of regarding relief from the miseries after a debauch with the rebound and exhilaration which sometimes mark the disappearance of gloom and melancholia; but it is germane to our purpose that there may be latent considerations, undetected even by those who act under their influence, which countenance the undue multiplication and unintentional exaggeration of the beneficial effects of treatment. A temptation may arise to resort to early liberation in order to relieve the pressure from within or from without, where an asylum is crowded to excess and, as often occurs, by inoffensive demented, or where large numbers of recent clamant and dangerous cases require immediate admission; and, should the superintendent be of a timid, irresolute, and sanguine disposition, he may yield to what cannot be otherwise stigmatised than as a compromise between two conflicting motives or duties. There may arise likewise a compulsion, exercised conscientiously, but tyrannically, by consultants, officials, or nondescript interlopers, to whose assumed penetration and advice the judgment is yielded, although an expert may be able to trace the germs of disease and even to predict a speedy relapse in the individual thus discharged cured. There is likewise a snare created by the pretended self-command of the patient under observation, by the assumption of external rationality, which in reality he possesses not, and by the concealment of prominent hallucinations and obnoxious qualities, in such a measure as to deceive alike medical and legal discrimination, and to lull to rest the suspicions of all around. But a more formidable source of error is incessantly presented

by the conviction on the part of relatives and other responsible parties that their friend has been restored to health; by their incessant importunities (even threats,) and by their assurances that their care and custody will accelerate amelioration—as it has done upon previous occasions—and another imperfectly restored lunatic is in this way added to the general community. But amongst these latent motives for the rapid and hazardous liberation of lunatics under treatment is the natural and most legitimate ambition of Superintendents to demonstrate to their fellow-labourers and in the annals of science the success of some particular mode of treatment—medical, moral, or material; to secure a reputation—personal and for a particular hospital; or to support and corroborate theories as to the curability of insanity. It is fortunate that such feelings of emulation stimulate the efforts of the high-minded and self-sacrificing class entrusted with the charge of the insane, but the effect may be easily shown to be disastrous in over-estimating the remedial efficacy of medicine, and the influence of drugs, detention, and hygiene. History affords testimony that between 1684 and 1703 there were 1,294 patients admitted into Bethlehem, of whom 890 recovered, being a proportion of almost 69 per cent.; and further, that from 1784 to 1794, the proportion was 34 per cent.* It is to be specially noted that neither paralytics nor epileptics were received into this establishment during these periods, and that, making all due allowance for any conjectural change in the type or inveteracy of alienation in different stages of our civilisation, the recoveries were what at present are achieved and what may possibly be a normal ratio. But in 1820 there is a sudden augmentation in the number of recoveries, for a physician of high repute affirms that the cures of persons in his asylum reached the unprecedented amount of 91 per cent. of recent cases, 35 of chronic cases, and 81 of all classes, even including the idiotic, the epileptic, and the fatuous. About the same time a popular writer of travels returned from a distant land with the somewhat startling intelligence that he had obtained irrefragable proof that 91 and three-tenths per cent. of cures had been effected under an experienced physician. Roused from passiveness or apathy to vaulting ambition, every English-speaking psychologist exerted his skill and—we must use the phrase—his ingenuity, in producing tables displaying what were conceived to be the triumphs of his art. Insanity became, in the eyes of the philanthropist, the most curable of formidable diseases, and, if taken during its earlier state and subjected to suitable remedies, must be cured, either by the efforts of

* Burrow's *Commentaries*.

medicine, or, as therapeutic agents were not then more potent or infallible than now, must cure itself. It became a race, a struggle, a strife for distinction, and statistics exhibited a sudden rush upwards from the modest success of Tyson to the astounding maximum of 100, even 110, per cent. In the present day, when these gigantic proportions have shrunk to a more moderate size, it is almost inexplicable, in passing the eye over the long lines of figures and percentages, to conjecture how such conclusions could be arrived at. A superintendent, whose subsequent eminence is said to have entitled him to the title of Pinel Secundus, announced that he had restored to reason lunatics at the rate of 100 per cent. It should be carefully noted that this success applied to 13 patients only, one of whom died. Another expert reached the number quoted by Burrows, and even the calm and cautious Tuke, of the Retreat, averred that, according to his observation, there were curable, of recent cases 91 per cent., of old cases 35 per cent., of all cases 81 per cent. From other records we find that while one superintendent can still boast of 100 per cent., a second falls to 99, a third oscillates between 82 and 94, a fourth has a variable rate from 82 to 93, a fifth reached 91, a sixth gives 80 to 90, while a seventh, a most honest and eminent historian of his own practice, inserts in his earlier chapters 80 per cent., but as the narrative proceeds, his success, or rather the mode upon which that success was computed, undergoes a signal alteration. It is incumbent here to protest that there is not the faintest insinuation as to the motives or the faithfulness under which such results are supposed to be arrived at. The explanation of the discrepancy which exists between past and present experience upon this point is to be sought for in the vicious or erroneous principles upon which these supposed facts are founded. In the first place, recoveries were estimated in reference to acute or recent cases only, such words signifying very different things and periods according to the convictions of the recorder. Instead of limiting recovery of acute cases to three months previous to admission, it might represent one year, and was, under all circumstances, indefinite and arbitrary. In the second place, the number of recoveries was calculated on the number of discharges. In the third place, all chronic and incurable, all epileptic, paralytic, idiotic cases, and even all deaths, were deducted from the gross numbers which were or had been under treatment, before the recoveries were dealt with; and these might then be compared with the admissions, the discharges, or even with the residuum still remaining in the asylum. It would be an insult to our existing convictions and to the principles, which may be

now pronounced catholic, regulating the estimates of the results of treatment in nervous diseases to point out how utterly fallacious, deceptive, and Utopian were such practices; but it is essential to our object to stigmatise them as subversive, on the one hand, of all correct notions as to prognosis in mental disease, and, upon the other, of the remedial powers which can be exercised for its removal or amelioration. In instituting any comparison between the results in different establishments, and in endeavouring to reconcile the palpable disparity between these which is conspicuous, various factors of restoration, as well as impediments to such an issue, must be embraced, as they intimately affect the general inquiry as to the duration and removal of alienation. Allusion has already been made to the influence of peculiarly constituted minds upon conclusions as to the present or potential benefit to the insane derived from medical interference; but the actual benefits differ independently altogether from the opinions of the expert in different countries and classes, in relation to the profession or trade of the patient, to the average amount of intelligence and education prevailing in the district, to the immorality or intemperance or irreligion of which each individual may have been a victim, and to his original capacity and subsequent development. It is well known that where imbeciles—and there are communities of imbeciles—are attacked by delirium or excitement, that, in the rare instances of transitory mania—and we use the word advisedly and without any intention of entering on a *questio vexata*—and where mutual disturbance originates in poisons, not alcoholic, but generated in the system, such as in the urine, bile, &c., the continuance of the nervous ailment is brief, its removal of easy accomplishment, and the apparent rate of recovery is thus augmented. Where mental or moral epidemics occur this remark is especially applicable, and there is good reason for believing that not only do the seasons materially influence the cessation or promote the chronicity of the neurosis, but that these affections are more amenable to the resources of art at one time—for example, in one century—than in another. The experience of Tyson has already been quoted, showing that between 1684 and 1703 of 1,294 patients admitted into Bethlehem, 890 recovered, while in the same institution, where still only recent, curable, or non-paralytic cases are received, between 1846 and 1855 of 2,729 patients admitted, 1,479 recovered (Hood). Making all due allowance for a change in the type of disease, the discrepant opinions of medical superintendents, and the revolution insensibly taking place in the views of the medical profession generally, a more striking illustration is afforded by the following

contrast. The period embraced was from September 30, 1868, to October 1, 1875. In 1871 Dr. X resigned. Dr. W succeeded him in the superintendentship of the same asylum. The last three *entire* official years of the administration of Dr. X embraced the period from September 30, 1868, to October 1, 1871, and the first three of Dr. W, the period from September 30, 1872, to October 1, 1875. The statistics of these periods show that, during the first period, of 1,191 admissions 516 recovered, or 43·32 per cent., and that, during the second, of 1,169 admitted 269 recovered, or 22·16 per cent. Thus, although the number of admissions in the second period was but twenty-two less than in the first, the number of recoveries was but one more than half as great. We are not permitted even to suspect that any other feeling than legitimate professional rivalry could have actuated these labourers in the same field. Nor is even this conjecture admissible, as a marked declension in the fruits of the cultivation during the last harvest described is discernible. This comparative view is taken from the records of a public asylum, and in such alone is competition intelligible. Upon this ground it is desirable that the effects of treatment in private asylums under the management of trained and trustworthy medical experts—and there are many such—could be ascertained, as the very ungenerous argument that this class have a vested pecuniary interest in the detention of the persons consigned to their care must operate in preventing premature discharges, and many of the evils which may flow from a strain after public notoriety and the creation of an artificial reputation for the skill and success of the medical authorities. As next in reliability, may be ranged the recoveries in our public asylums, where the determination of the fact is arrived at by an educated responsible officer, who, although perhaps less or more influenced by disturbing, though unconscious, sources of fallacy and error, acts according to the dictates of a deliberate judgment, and under the criticism of a vast jury composed of associates and fellow labourers. Such deliverances almost invariably vindicate the foregoing remarks as to the absence of uniformity in the effects of treatment; whether the disparity displayed be in the product of a difference in the standard employed, or in the perspicacity or imagination of the observer employing it, is not now discussed. For example, taking the annual reports of five large British public asylums for 1879, it appears that the percentage of cures ranges through 25, 33, 40, 41, 47 per cent. But it is highly probable that, at the present time, as when Thurnam wrote, “In round numbers, of ten persons attacked by insanity five recover and five die, sooner or later, during the attack. Of the five who recover, not more than two remain

well during the rest of their lives. The other three sustain subsequent attacks, during which at least two of them die."

Such estimates are unavoidably formed at the moment of the discharge of the patient and based upon the most trustworthy evidence accessible. These, although in one sense oracular, and the mere opinion of one person, must be accepted as data of great authority, seeing that the opinion thus emitted represents the prolonged observation and criticism of a scientific and conscientious expert, who, while he may be deceived by theories or hopes, cannot be suspected of deceiving others. But when it is known that in many institutions the emphatic declaration of discharged cured, and all its concomitant and consequent relations to psychological inquiry, is pronounced by a board of county gentlemen, who may, or may not, be guided by the convictions of their subordinates in the management of the house, it is natural to recoil from the perplexing confusion which may thus arise as to the absolute reality and degrees of the curability of the insane. It is well known that in many asylums, before the removal of an inmate to his house, there must be an appearance before the directors, so that the report of the superintendent, as well as the health, capacity, self-control of the postulant, may be tested, and, as is generally the case, confirmed by the bureaucracy. This practice may prove a guide and a guarantee to the public, but is neither complimentary to medical discrimination or honesty, nor conducive to accuracy in speculation on the progress and termination of disease. The board supposed to be thus engaged generally consists of men of high birth, ample education, unimpeachable integrity, and unselfish feelings, so that their deliberations and verdict are entitled to perfect respect, although they cannot be hailed as truths of Holy Writ or as scientific conclusions. But when such a body is composed of parish guardians, or, what is equivalent in Scotland, the parochial board, and when the members, whose honesty of purpose we do not here call in question, may be the butcher, baker, undertaker, &c. of the village, borough, or union—who, unless inspired, cannot possess any of the qualities which enable the observer to judge of the mental condition, either in health or in disease, of any individual; and who, whatever may be their humanity and sympathy, and their independence of spirit, cannot fail to be influenced by the selfish, or they may be honourably designated, the social and patriotic interests of their constituents—it is difficult to avoid a smile, or a shudder, over the havoc which may accrue to medical statistics, and the injuries which may be reflected upon families and communities as well as the individual under examination. But such fiat may depend upon the impressions of a single

observer—the relieving officer in one country, the inspector of poor in another—who are constrained to act in accordance with their brief, or their own very partial information. When liberation is effected by a family council, or by the decision of friends, who have no opportunity of watching the peculiarities of their cloistered relatives, and who are animated by a natural and justifiable anxiety to promote the well-being of the person in whom they are interested, and to secure the supposed advantages of freedom, home, and original pursuits and pleasures, the risks of such interference are greatly multiplied, and to this source may be attributed the majority of the relapses which crowd the columns of the register of every public institution. But the inmates of such establishments, particularly where they belong to the affluent ranks, may be removed from treatment in a number of other ways. They may be dismissed by the authority of medical, legal, or official assessors, of high national or public functionaries, acting with or without advice, with or without any explanation of the grounds on which action has been taken, of the objects proposed, and, it has happened, in direct opposition to the experience and warnings of those who have cared for and scrutinised the symptoms, and have arrived at well-digested opinions as to the probabilities of perfect and permanent restoration to health. But into the possible mistakes or misdoings of these possessors of power I hesitate at present to enter.

From this *vidimus*, which is, unfortunately, far from exhaustive, I have endeavoured to exclude all considerations of self-interest and pecuniary gain, because I believe that such unworthy incentives are of rare occurrence, and cannot materially affect speculations as to the ultimate issues of mental diseases. In compliance with what is almost the universal custom of those who have been engaged in exposing abuses, errors, and the miscarriages of philosophy and philanthropy, I would very humbly venture to suggest, as a means of preventing or lessening the evil complained of, the creation of a corps of experts, as has been proposed for other purposes, and which might be incorporated with the Board of Commissioners, or who might be constituted from properly qualified medical men, upon whose judgment and decision alone, in conjunction with those of the ordinary hospital superintendent, should depend the liberation of every patient.

It is incumbent to acknowledge my indebtedness to a pamphlet on “The Curability of Insanity,” by Dr. Pliny Earle, Northampton, Massachusetts, for many facts in this article.

ART. IV.—PSYCHOLOGY IN ITS RELATION TO MEDICINE.

BY MAJOR GREENWOOD, M.R.C.S.E., L.R.C.P. Lond.

OF all the sciences none have made more progress during the last few years than Psychology, the subject of this paper. Deep into the mists of time must we go back if our endeavour be to discover the earliest epoch when the problems of mind first began to perplex humanity. The ignorant savage who in the earlier eras of the world pondered with awe over the various phenomena of nature, fabricating for himself rude theories of natural theology, was in his way as much a student of Psychology as the *savant* of the present who eagerly seeks to read in the ever-growing resources of cerebral pathology the wide and varied world of mental phenomena. The latter possesses the basis that the former lacked, and already the Archimedian lever has been applied to a universe of false doctrines and ideas, with what result a few more years will show.

None can consider of small import this, from the one point of view, most modern, from the other, most ancient of sciences, dealing as it does with the highest emanation of life without which Biology would be poor indeed. To the student of medicine the history of all the phenomena of life must be of the greatest importance; and although it is to the objective aspect his studies are usually applied, and not unjustly—for here the ground is much more open and clear, many facts have been ascertained and upon it the lamp of science throws its strongest light—still he must not altogether disregard the subjective; this side of life will reveal a field equally spacious, and its study, though more complex, yield scarcely inferior rewards. To many the interest of the pursuit will be enhanced by the mystery enveloping it, and by the thought that perchance through its paths they may approach more nearly to the secret of life than by any other.

Psychology is not by any means a new study; in all ages it has had its votaries, and many of the old philosophers who stand high in the history of the world for pre-eminence in other branches of learning have left enduring records of having thought long and deeply over the wonderful problem of mind. No science has suffered more than this from ignorance and

superstition ; and as a perfect freedom of thought was essential for its development, it is only comparatively recently it can be said to have been established on a scientific basis. It is not here attempted to deal with Psychology in a strictly scientific manner, nor to discuss the more modern views and theories relating to its phenomena, interesting as it would be to trace its history from the time of Aristotle, more than 2,000 years ago, when the first great theory was evolved, through the many modifications that have sprung from this as the thoughts of the great Greek were acted on and remoulded by the minds of many and diverse ages. This would be far beyond the scope of a single paper, and I shall only briefly allude to it. The definition also of Psychology cannot claim to be exhaustive, but only to serve as an introduction to a few remarks on its study ; when attention will be almost exclusively given to that branch which is more intimately connected with medicine, viz. mental pathology, if so fine a term may be applied to a few crude remarks on certain aspects of insanity.

Psychology, as the term implies ($\psi\upsilon\chi\eta\ \lambda\acute{o}\gamma\omicron\varsigma$) is the science of mental physiology, that is, the study and examination of those phenomena which from the earliest times have been regarded as depending on some entity distinct from the animal organism to which the Greeks applied the term *Psychè*, and whose nearest equivalent in our language is the soul.

This has always been regarded as the impassable line between humanity and the lower animals ; for although it is recognised that man in certain conditions of disease may lose these special attributes of the *Psychè* and differ in scarcely any respects from the beasts of the field, no instance has ever been on record of any animal other than man possessing these pre-eminently distinguishing characteristics. No doubt the careful observer has for many years been cognisant of the fact that as we ascend in the scale of life we meet with a more and more highly developed type of nervous system, and we see the animals in these latter classes endowed with qualities resembling more and more those relegated to the *Psychè*, and, in fact, it is generally considered that the difference between the meanest creeping thing and the most highly organised animal is simply one of degree ; only is it when we come to compare this latter with man that the real difficulty commences, and that dispute and division wax strong in the army of scientific thinkers, and the *Psychè* comes forward with its apparently insurmountable difficulties.

With the *Psychè* too are linked all the beliefs and theories of the past and present as to a future existence after the decay of our animal organism. It was this entity that Pythagoras

believed was continually passing from body to body; nor was the transmigration confined to men, for not a few believed that in some cases the *Psychè* at death passed into the bodies of the lower animals, and strangely enough this belief has found a place in the mythology of most nations. Plato first taught its essential immortality, and its perfect entity and existence apart from the body, together with its limitation to man, form one of the fundamental doctrines of Christianity.

Science, however, has little to do with the past theories of the ancients on the nature of psychical philosophy: they were the emanations of the ages that produced them, and often help to throw light on the history of those times, but as scientific deductions are now dismissed to the region of poetry and imagination.

The first difficulty that presents itself on entering into any discussion on the subject of Psychology is to define its boundaries and limits. Here, as in nearly all natural sciences, we find it by no means an easy matter, and the maxim, "*Natura non habet lineas*," was never better exemplified than in this instance.

At the commencement of our study we find ourselves mentally drawing a sharp and rigidly defined line between the physiology of the human mind and every other science in nature; we think of it as the ancients did, as something quite distinct from everything we can possibly be acquainted with; we assume almost at once that the laws which hold sway and cannot be disregarded in other natural sciences in this avail nothing.

Acting thus we should progress but little, and were the laws and conditions of Psychology of such a kind they might justly be dismissed to the unknowable; and with that science can have little to do: it deals with the unknown, not the unknowable.

The fact, however, that the physiology of mind is now allowed by most to be fitly placed in the ranks of natural science; that is to say, to belong to a philosophy that claims as its only right of existence a basis of undisputed facts, many of which have taken ages to discover and elaborate, but when once discovered are for all time. This, I think, is great progress on the time when mental philosophy was supposed to be governed by no laws, but was placed on an arbitrary pedestal by itself.

As in our study of the animal organism we distinguish two branches of physiology, viz. that of health and that of disease, so in our study of mental phenomena we may with great utility make for ourselves a similar distinction; and as our facts increase in number and our theories arise where one branch fails us, the other will often supply what is wanting to complete the

chain; and, moreover, with regard to the body, it is often impossible to say when we reach the limits of health and disease begins, still more difficult is it to tell among all the diversities of psychical phenomena the exact period when the healthy mind becomes invaded by disease. Often, indeed, when it is advanced the character of the phenomena becomes less complex and more intelligible; they appear less anomalous, and we find ourselves grouping their causes in separate classes with almost as much certainty as if we were dealing with the better known diseases affecting the organs of animal life. This, however, is not the case in the earlier stage, as the physiology of the mind in health is still in its infancy, its early pathology is still less understood; in an advanced stage it may afford no trouble to the physician to recognise it, and he may diagnose widespread devastation going on in many of those intricate centres of which so little is known, but on the healthy condition of which so much of the greatness of life depends.

As in the case of organic disease, it is not difficult to trace its symptoms when the functions of some important organ have become almost annihilated, and the labour and skill consist in observing at the earliest possible stage when these functions become altered and vitiated; so must our endeavour ever be to discern if possible when the first small cell becomes altered in character, and to read in the psychical symptoms it presents, and which are to be discovered, the indication thereof, as it will often be then, and then only, that our remedies will be of any avail.

Not that I mean to say among all the Protean aspects in which the human mind appears in different individuals it would ever be possible to draw a hard and fast line between what is pathological and what physiological, as it is extremely probable that what is physiological in some may in others be incipient disease, and many of the qualities ranked as virtues among mankind when carried to excess become disease. At all ages men of great imagination and creative genius, such as poets, and in early times soothsayers, prophets, and the various ministers of the old superstitions, have been regarded with some degree of suspicion as to their soundness of mind by many of the outside world who have been unable to comprehend them.

True it is that at first this scepticism did not exist, and then in the fullest sense imagination, healthy and morbid, bore the utmost sway, a grossly ignorant world putting down as heaven-inspired whatever they did not understand, and too often hearing the oracles of God in the ravings of madmen. Hence the respect of the ancients for those of unsound mind; and these, at a period when medicine could scarcely be said to exist as a

science, not unfrequently were the physicians of the community. This relic of the past still exists among our aboriginal savages, where we often find the *fetish*, or medicine-man, in the ranks of the insane.

All, however, changed, as the world's education advanced, and the above-mentioned scepticism took the place of the old superstition.

John Dryden has said :

Great wits are sure to madness near allied,
But thin partitions do their bounds divide ;

and when he wrote these lines he was expressing a belief that is as common and widespread now as it was two centuries ago.

Of course, among unimaginative people it is only natural to have doubts as to the mental soundness of the writers of sentiments they cannot understand. They read the words, but the thoughts that the words are intended to convey strike no responsive chord in the minds of the readers ; the language in which they are put is their own mother tongue, and they think if the sentiments were not irrational they must comprehend them. Hence, they are often put down as "poetical nonsense," "mere imagination," and in their own minds they consider them the outcome of a species of mental unsoundness, not that they would tell you the writers, perhaps men of worldwide fame and reputation, were in the least degree insane. No, the opinion of society has too great an influence upon them, and impresses them unknowingly, so that they take in faith that such a sentiment or thought is sublime when to their own minds it is simply unintelligible.

But, apart from this, it is also a question whether "great wits are 'not' to madness near allied;" and as evidence in favour of this may be brought forward the tendency to insanity shown by many of those in whom the imaginative genius has been most pre-eminent. It will here be naturally urged that these in their pursuit of fame threw much more strain on their mental faculties than others, and as is a well-recognised fact in every animal organ overwork is too frequently followed by some form of degeneration, hence that the overworked mind was naturally prone to disease. In some cases this is undoubtedly a true explanation, but it does not afford a reason why the same deterioration of mental faculties does not follow the mental labour of great thinkers, mathematicians, and others, in whom brain-work is probably still more excessive, with anything like the same proportional frequency.

Is it that through the imaginative faculties we approach more easily to the boundary where mental health ceases and

disease begins than by any other way? Is it possible that the wonderful imagery often seen in the creations of the poet may be somewhat allied to the delusions of a madman?

Perhaps Psychology might show that they depended on not altogether different changes of brain matter. It may be said that the former controls, while the latter is ruled by his imagination, and this in a certain sense is true; but an old saying that one may be carried away by the imagination is often more literally correct than is supposed, and very few could be really said to control it, although extremely probably is it that every thought or image formed by the mind depends on cerebral changes, as definite as are now considered to accompany every voluntary movement of the limbs so readily under control. Whatever may be the changes upon which the faculty of imagination depends, in all forms of insanity they must be greatly multiplied, and the psychical phenomena resulting from this are among the first symptoms of mental disease. Thought and imagination during sleep are normally absent or present in a very modified degree; very suspicious therefore is it of commencing disease when dreams—that is to say, morbid imaginations—appear more and more vividly at night, and force themselves more and more on the attention of the patient; and in proportion as his attention is fixed by them, and they appear to him real and natural, we recognise the near approach of mental unsoundness, for we have direct evidence of his imagination getting more and more out of his own control, the servant becoming master. As a consequence of this, sleep cannot take place, for it is essentially an abeyance of the imaginative faculties, a time during which changes that have occurred in the brain cells, due to their discharge of function, undergo a reparative process, and are renovated for fresh exercise. This reparation in a great degree can only occur during sleep, and if sleep be withheld morbid mental changes may arise *de novo*, or if present make rapid progression: hence the importance of procuring sleep in the early treatment of these diseases. Another important symptom of mental disease, and one which is often present many years before disease is marked, is what is familiarly known as eccentricity; not that every eccentric individual is to be regarded as insane, or necessarily will ever become so, but it is very probable that among this class their eccentricity is too often a psychical symptom of some deviation from health having taken place in their higher centres. These morbid changes may be of the most trifling character, destined never to become greater, but they may also be early symptoms of advancing disease.

General pathology teaches that morbid change in all organic tissues has a tendency to increase, and hence eccentricity may

be said to bear the same relation to insanity as a slight amount of arterial degeneration to apoplexy; they are both probably among the earliest symptoms of their respective diseases, but the relationship of the latter is more readily understood because far more is known of the physiology of body than of mind.

Mental disease, in which eccentricity is a prominent symptom, not unfrequently culminates in suicide, and although juries may invariably pronounce in their verdicts, "Death during temporary insanity," there is great question as to its temporary nature. Mental disease must, indeed, be somewhat advanced when delusions or morbid imagination have gained such control over the individual that the first law of nature, self-preservation, under their influence is disregarded.

It is an interesting fact that many forms of eccentricity are hereditary; that insanity is so likewise is unquestionable, and with regard to its hereditary nature and the subtle and latent forms it may assume through several generations, it may be with intermissions but often with ineradicable obstinacy, much has been said and written. I would specially instance suicide as one of these forms of hereditary taint, and I might further add, suicide without any apparent reason for the mental condition from which it springs; for men under the influence of violent passions, or stimulated and goaded by the spur of misfortune, tend to lose much of the self-control on which a healthy condition of the mental faculties depends. Hence in those constantly subject to such depressing influences, a natural weakening of the higher centres of the brain, results from frequent over stimulation, as is the case in all the organs of animal life, and in this way self-control becomes permanently weaker as the centres on which it depends undergo degeneration.

In these cases disease is more marked and intelligible; it progresses much more slowly, and suicide is only one out of numerous symptoms that are the usual manifestations of deficient self-control and growing weakness of mind. Our patient will often take to drink, and by slow or rapid strides become a confirmed drunkard; or he will be noted for abnormal shortness of temper, with often more or less change in his moral character; his memory becomes faulty, and there is often a noticeable falling off in his intellectual vigour. But, as I before said, I would draw more especial attention to a form of insanity, probably more or less hereditary, in which suicide, apparently uninfluenced by any of the above causes and perpetrated with appalling completeness and design, is the first observable symptom. What could be more instructive than the case of Prévost Paradol, that occurred two years ago, and which excited so much wonder at the time, as was evinced by the lengthy notices in the

daily press? A young man in the best society of Paris, whose life was only just beginning, talented, possessed of a large circle of friends, and as far as was known, unburdened by a trouble, is found one morning to have destroyed himself, and evidently by design. True, it may be said, none can know what motive he might have had; a cheerful face and disposition have been known to mask the most bitter mental anguish; but when the rest of the story is told, and we also learn, as a coincidence, that at almost the same age and under similar circumstances his father, a rising statesman and then French Ambassador at Washington, died by his own hand. Surely this is more than coincidental! Here was a symptom that existed in the father and was transmitted to the son. Had this disease, so insidious, no other symptoms? None were observed or reported; but granting that the suicide was a symptom, is it in accordance with the analogy of organic disease for one so gross to be the first indication of aberration from health? Had the *Psyché* been more closely questioned it is by no means improbable that much more might have been ascertained as to the mental condition of these men: eccentricities that none had dreamed of, or if noticed, put down as nothing, might have been the first physical signs of the final catastrophe. In such cases as these, it is not too much to say that treatment might be everything, and what cases are there in which this is more urgently needed? the very essence of their fatality lies in our ignorance as to their history. The mental unsoundness, as a whole, of these individuals cannot be so hopeless, or how explain the accuracy with which the ordinary duties of life have been conducted by them up to the time of their suicide? Surely if disease were very rampant symptoms would be noted by some of the many who must have had business relations with them, and met them frequently in the everyday affairs of life; for the men I speak of have not always been noted for their retiring and seclusive habits; many have been most active, and in the case of some it would seem that they might have rushed into body and mind engrossing pursuits with the object of guarding against some special form of mental activity that they felt was fated to be pernicious to them. If we take this view we have at least a plausible hypothesis to work upon, and we are led to consider in our minds as to the nature of this "special and probably varying form of mental activity." This is the enemy we have to combat, doubly dangerous because so subtle and difficult to discover.

Now, as the tendency of these psychic forces is to pervert the healthy action of the organism we may consider them under the head of delusions, but it is of the utmost importance when

we use this term to be aware that delusions may be of the most varied character. We are all familiar with the story of Lord Castlereagh and the little woman in the red cloak that used to appear to him exciting various impulses; but delusions are seldom so material as this, and when they are they occur in patients whose disease it is not difficult to recognise. Delusions, in a practical point of view, are only important as far as they originate impulses, and these latter may be divided into two classes according as they arise from healthy or morbid mental action. Now it is obvious that it would be impossible to draw an exact line between these two classes, although none can over-estimate its advantage practically if such could be done; and as the science of Psychology progresses and its laws become more understood, such a division will be more accurate and valuable.

Who among us can claim a mind that has never acted morbidly, or, in other words, has never given rise to impulses at the bidding of delusions? What difference is there in kind between a delusion that makes us do some trivial, purposeless action and one that, perhaps by a much more complicated series of impulses, instigates self-destruction. Here, it may be said, we have the two ends of the chain, and the intermediate points represent a huge field open to the researches of the physician, and varying considerably in extent and intricacy according to the character of the mental calibre of the patient.

In all cases of mental disease statistics from our asylums tend to show that in proportion as they are treated early the prognosis is favourable, and becomes rapidly bad and hopeless with their chronicity in this point as in nearly every other according with the pathology of animal life. Insanity is said to be on the increase, and hence it behoves still more the practitioners of the future to be cognisant with the chief facts of Psychology, as they are quite certain to meet with and have to treat many cases of this kind. Macbeth asked with bitter irony of his physician,

Canst thou not minister to a mind diseased?

The physician of the nineteenth century can answer such a question with far more confidence than was possible in the sixteenth; and a time will certainly come when mental pathology, though more complicated, will be no less material and intelligible than that of the organic system. Who can reasonably doubt now that the brain which we can see and feel, and whose weight not unfrequently corresponds in some measure with the intellect of the individual, is an organ in all respects comparable with the liver and kidney, differing only

from them in respect to our relative ignorance of its function? If our patient suffer from jaundice or uræmia we invariably see in our mind's eye clearly which is the offending organ and, much as we may differ in our way of doing, know well what must be done before health can again be established.

Let us thus regard the maladies of the mind. Instead of liver and kidney disease we are now dealing with brain disease, and when we have a patient brought who tells us he is constantly hearing voices at night prompting him to various acts, or that a mysterious stranger is ever dogging his footsteps, let us as surely conclude that certain cerebral elements, we know not what or how many, have become functionally or organically deranged, as from the yellow skin and black urine of the jaundiced patient we know the functions of the liver are diseased.

Of one thing we may be quite certain: we cannot study organic disease in all its aspects, disregarding the mental condition of our patient. Probably there is no disease but has its reaction on the mind, and would afford psychical symptoms if they could be observed. It is in the experience of all how deeply at times the bodily condition will affect and give colouring to the mental; many are the diseases in which this has been recognised for generations, and as we should expect the nearer they are, and the more they attack the great nervous centres, the more prominent become the psychical phenomena.

It is the same throughout the physiology of life, the mind grows and develops with the body as it likewise decays and degenerates with it. The external world acts equally on both, and although their reactions may appear different, they are bound together indissolubly; we may separate them artificially, but neither in health nor disease can mind or body be properly studied alone.

ART. V.—ON GENERAL PARESIS.*

BY A. E. MACDONALD, M.D., New York.

GENTLEMEN,—We are to consider to-day the fourth and last of the forms of insanity embraced in the classification which we agreed at our first meeting to accept, and it is not alone the last, but, to my thinking, the most important of those forms, and I have more than one reason for thinking so. In the first place, it is more recent, at least in its recognition, if not, indeed, in its origin, than the forms which we have discussed. Our knowledge of its course and causes and symptoms is much more limited and much less positive; and there is the further reason, which may increase the importance of the present opportunity of study to many of you, that, though prevalent enough in this neighbourhood, it is comparatively unknown to those localities to which you may propose, after the completion of your studies, to remove.

I speak of paresis as a comparatively newly discovered form of insanity, and you will remember that we found its name to be a comparatively recent addition to the three forms of insanity of which Pinel's "natural system" of classification was originally composed. Now that the disease is recognised, and that opportunities for its study are ample, we see that its symptoms were observed and recorded long since; but so rarely were they observed that they were not held to constitute an individual form, but were simply regarded as accidental complications of one or other, indifferently, of the forms already recognised. Indeed, the date of its promotion abroad to the dignity of a distinct disease is within the present century, while in this country but little over thirty years have elapsed since its first appearance or identification; and although, since that time, the number of cases presenting its characteristics has in this neighbourhood greatly increased, its extension toward the interior has been gradual, and there are still many localities, especially in the west and south, where it has not yet appeared. That it will do so the history of the disease and its geographical progress can leave no doubt, and hence my belief that it is especially important that you should study it here where it is common, in order that you may recognise it if you go where it is now unknown but will surely follow.

I speak to you of the disease by the name commonly applied

* Read before the Commissioners of Charities and Correction at the New York City Asylum for the Insane.

to it in this country—"General Paresis." English writers, as a rule, use the longer term—"General Paralysis of the Insane"—while individual authors have each their own designation, "Paralytic Dementia," "General Incomplete Paralysis," "Progressive Paralysis," among the number.

The use of the word "progressive" in one of these designations is a happy one, for progression is a principal characteristic of the disease, exaltation being another. In effect, general paresis may be defined to be a form of insanity in which there is an association of mental and physical evidences of which progression and exaltation are the leading characteristics. As the patients in the different stages of the disease are presented to you, you will observe how constant and uniform these characteristics are. You will see, first, that they are—at least those in whom the disease is of relatively recent development—men of apparently strong frame and vigorous health. Paresis does not find its victims, as do commonly the other forms of insanity, among those who are weakened by constitutional defect or by disease, but selects them from among the active and vigorous. Nor does it go to the extremes of age, but to the prime of manhood.

I will anticipate the appearance of the patients by giving you a brief summary of the leading symptoms of the disease and of its course, and as the patients are brought before you, you will recognise these symptoms and others which are less uniform in their presence.

As a rule, then, paresis makes its appearance in a man of middle age who has apparently been possessed of a strong constitution and of robust health. It is quite possible—probable, indeed—that he has been somewhat inclined to dissipation or excess in various ways; but it has not gone to the point of perceptibly affecting his health, or appearance, or business capacity. The change which comes over him is rather a more sudden one than in most forms of insanity, excepting acute mania, and it is somewhat of a question whether the mental or the physical symptoms have precedence. Generally, in the statements of friends, the first place is assigned to the former, but they are plainer and more likely to attract the attention of the laity; and it is probable that if all cases could be carefully observed and the two sets of symptoms appreciated, they would be found to appear and advance coincidently. As regards the mental evidences, as in the approach of other forms of insanity, a period of irritability and depression may be expected; but it may be but slight and transient, and attract no attention. Then the element of exaltation asserts itself; the patient is lively and excited; he feels well in body, happy in spirits, hopeful and con-

fidant in business. He is disposed to enjoy life, to eat, drink, and be merry, and to make his companions and acquaintances share in his enjoyments. He becomes speculative and reckless in his transactions, extravagant and wasteful in his expenditures and his bounties; and before his condition is fully recognised and his property protected, he is apt to hopelessly embarrass his affairs. Increase in these tendencies, loudness in speech and manner, eccentric dress, indecency of language and demeanour, and possibly acts of violence, pave the way for positive delusions, and, as I have said, the main feature of these is their exaltation or exaggeration. In whatever field the patient's fancies may wander, they carry him far above his fellows. He is the richest, or the most powerful, or the most learned; or if, as sometimes happens, a melancholy tinge is imparted to his thoughts, he is the most abused and the most wretched.

All this time the physical symptoms have been appearing and progressing, depending upon increasing loss of power of co-ordination in the voluntary muscles. The muscles of the tongue and lips, as those most delicate in their functions, are the first to suffer or to show it, and there are, as a consequence, alterations of speech. At first it is but a slight hesitancy or catching, but it becomes thicker and more drawling, and the enunciation is indistinct and halting, despite the patient's manifest efforts to speak with distinctness and deliberation. At the same time the muscles of the lips are tremulous, and the patient has difficulty in protruding the tongue, and while it is out it quivers and jerks, and may be suddenly withdrawn without his volition. There is evident failure, too, in the co-ordinating power of the muscles of the extremities; but these, as well as characteristic alterations in the conditions of the pupil, can be better shown to you from the patients themselves.

From this beginning the patient goes on surely, but more or less rapidly, through increasing exaggeration of delusions mentally and increasing paralysis physically, to the end. I may say now, before the patients come, that they may not hear me, that this end is death. The list of therapeutic agents has been ransacked, the pathological appearances studied, but as yet to no useful purpose. It is true that recoveries have been recorded, but they are at best insignificant in number, as well as doubtful in authenticity. Nor is the inevitable end long of being reached when once the disease is fully established. Three years is a long limit for most cases, though some have passed it. The longest period elapsing between development and death, in a case coming under my own care, has been short of six years. In these cases death occurs from the disease uncomplicated, and may either result from the gradual increase of the

paralysis and its extension to the muscles concerned in deglutition and respiration, or from the convulsive seizures which come on in its course. In other instances, pulmonary complications arise and end the patient's life.

Phthisis is a not uncommon complication of general paresis, as indeed of other forms of insanity, and when it is present it seems to have an effect in shaping and colouring the delusions. It is in such cases that you will find the tendency towards depression that I have spoken of as occasionally existing. It stops short of the depression of true melancholia, however, and only modifies without supplanting the delusions of greatness or wealth. The patient may tell you that, through the machinations of his enemies he has lost his kingdom or his fortune; but he will tell you, too, that his loss is but a temporary one, and that he will soon be more powerful or wealthier than before, and as, at any time the ravages of the pulmonary disease may be temporarily arrested, the original delusions will return.

CASE I.—The patient whom I first present to you will show excellently the physical marks of the disease. In his case the progress of the malady has been rapid, but seven months having elapsed since its appearance. He is thirty-two years of age, and has evidently been a man of fine physique. You do not get many mental symptoms from him, for he has already passed from the lively and talkative into the dull and stupid stage; and besides his speech is so stammering and incoherent that his answers to our questions are scarcely intelligible. You see very plainly here the tremulousness of the lips and tongue of which I spoke. He can only protrude the latter with the greatest difficulty, and has little or no control over it. His hands and limbs are equally independent of his will; the former tremble and jerk about, and his gait is so unsteady and tottering that he seems in constant danger of falling.

You notice that there is a decided inequality of his pupils, the left being much dilated and failing to respond to light, while the right is about normal in size, and does so respond. This is a lesion which is almost characteristic of general paresis, and which, when associated with the mental evidences of which we have spoken, may be taken as settling the question of diagnosis. It is true that unequal pupils may be found in other cases, and even in sane people; but in the latter a history of mechanical injury, or of strain by excessive use of one eye, as in the case of engravers, may generally be found to account for it. In the case of paretics, at the inception of the disease, there is usually intense and equal contraction of the pupils—"pin-hole" pupils, as we call them—but subsequently they dilate, and dilate unequally. They are apt to lose their shape, too, and become

irregular, from lapping over of the edge of the iris. In some cases the right pupil is the more dilated, in others the left; and a curious fact in this connection, first recorded by Dr. Austin, in England, and verified by observations in this asylum, deserves to be mentioned. This is that where there is any tendency toward melancholy or depression, the left pupil will be found to be the larger, while where the opposite tendency exists, as it does in the great majority of cases, the right pupil will be the more dilated. I do not venture to account for this relation, but it certainly seems to exist, as you will see, I think, from the patients before you.

I may speak to you now, as well as at another time, of the probable causes of paresis. Of the general type of persons from which its victims are selected we have already spoken, and it will prepare you for what follows. The assigned cause in the case of the patient before you is excessive sexual indulgence, and in my experience it is the assigned or assignable cause in the great majority of cases. There is the source of error to be feared in this case which affects all attempts to ascribe causes to attacks of insanity of any kind—the doubt as to the real relations of cause and effect. Hence, if we get concerning a paretic the history of excessive venery, we may, especially if the history is only of recent indulgence, suspect that the excess is due to the disease and not the disease to the excess, and we may admit at once that we do have cases of paresis where there is not only no reason to suspect over-indulgence, but where the negative evidence is so conclusive that we have to seek for other causes. But in the great majority of cases, at least of those coming to this asylum, there is a straight history of inordinate venery, and strong corroborative evidences and appearances. With this we get too, in most cases, a history of hereditary tendency to insanity, and of intemperance in the use of stimulants; but this is true, too of the admissions generally, and not alone of those suffering from paresis. Other assigned causes are sunstroke, syphilis, and injuries to the head; but, as compared with the cause I have cited, they are infrequently advanced, and this leads me to say a word regarding the question of sex in the matter of liability to this special form of insanity. It is an undoubted fact that excessive sexual indulgence is less disastrous in its effect upon the female than upon the male, and, therefore, if it is really the principal factor in the production of paresis, we should find that disease much more prevalent among men than women, and this is exactly what we do find. In this asylum, which, as you know, receives males exclusively, there are now probably a hundred cases of paresis. In the corresponding asylum of the department devoted to the care of females,

although the entire number of patients is much greater than here, there are, according to the report of the Superintendent, not more than three or four; and, by way of further confirming the theory advanced, it is recorded that, where women suffer from paresis, they are generally those who have led dissolute lives as professional prostitutes.

It is noticeable that, when paresis first makes its appearance in a given locality, its victims are exclusively males. As time passes on, a few cases are found among females, and thereafter their proportion increases as the disease spreads.

CASE II.—This is also a comparatively recent case of paresis, the invasion of the disease dating back only five months. He is a younger man than the other, about 27, and you see that the physical disturbances are by no means so far advanced. In fact, at first glance, as he sits there, he appears a well-nourished, healthy young man. But as he rises and comes towards us we see that his gait is perceptibly affected, that his hand is tremulous, and that his pupils are unequal, the right being this time the larger. When he speaks, the difficulty of articulation is marked; but we can understand him distinctly enough, and learn the drift of his delusions. They are, as is commonly the case, at least in the commencement of the disease, connected with his former pursuits in life; they are limited in number, and are by no means as exaggerated as those shown by some, or as they are themselves likely to become as the disease advances. He was, prior to his admission, a professional billiard player, a champion in one branch of the game, and but recently engaged in a tournament in this city. Accordingly he accounts for his residence here by telling us that this is a large hotel, that he has charge of the billiard-room, with a fabulous number of tables, from which he derives a large income, and that the only feature of the establishment to which he objects is the fact that the door of the bar-room is always kept locked, and that he cannot get access to it. As it happens, there is another patient in his ward, a paretic also, who was likewise a billiard champion, or thinks he was, and these two worthies spend much of their time in discussing the preliminaries of a grand championship match which is to settle the question of supremacy between them. It is needless to say that the stakes are something enormous, and that each is sublimely confident of his ability to win them.

Now, here are two patients, the delusions of each of whom depends largely upon belief in the entire truth of the delusions held and enunciated by the other. This is a peculiarity which you often find among patients with paresis, and do not find among patients with other forms of insanity. You will

remember that at our former meetings, and especially when we had the maniacal patients before us, there were often implied, and sometimes audible, expressions of dissent on the part of other patients from the views of the particular patient who happened to be addressing you, and these views were often ridiculed and laughed at. As a rule, an insane man appreciates the falsity of the beliefs of other insane men around him, while cherishing beliefs equally false himself. And this is a fortunate thing for the officers of asylums, for it prevents the association of patients in schemes for attack or escape. Should one patient invite the co-operation of others in a plan to escape, the chances are that they would inform upon him, believing him quite unfit to be at large, while each considering for himself that his own detention is quite unwarrantable; and where a patient attacks an officer, it is quite common for other patients to interfere for his protection. There is, then, usually but little confidence between the insane, and but little acceptance of the delusive ideas of one by the other. But the paretics are in some measure an exception to this rule. It is by no means uncommon for one of them to uphold the correctness of the assertion of his fellow-patient almost as loudly as his own, unless, indeed, those views clash with his, in which case, of course, the other man is all wrong, just as in the case of sane people.

This patient, and the other of whom I have spoken, hold each the delusion that he is going to win money from the other, because he believes the delusion of the other that he has got money to lose. Similarly, a patient who was formerly a professional gambler plays cards with his comrades industriously, cheats incorrigibly, and flatters himself that he is rapidly absorbing the millions they claim to possess; and in more legitimate business there are transactions made and copartnerships formed that are quite dazzling in their results, and always equally productive to both parties.

CASE III.—This is an exceptional patient in one or two respects. In the first place, he is much beyond the usual age of paretics, being aged sixty-six; and in the second place, the disease has lasted an unusually long time to have reached only its present stage, for he has been an inmate here for five years. You see that he is a lively little old gentleman, fat and good-natured, very talkative, and with a disposition to assume the direction of affairs and generally assert himself. There is surprisingly little physical disturbance for one in whom the disease has endured so long, and whom it has at times affected so hardly—for he has more than once been at the point of death from the epileptiform attacks which are incident to paresis. The affection of

the speech and gait, though perceptible, are not marked, and the difference in his pupils is the only decided physical symptom present. The right pupil is again in his case the more dilated, and he feels that there is some trouble with his vision, and he is constantly asking for spectacles, which, of course, fail to correct it. But, if the physical symptoms are absent—or in abeyance, for he has shown them decidedly enough at other times—there is no lack of the mental ones. His delusions cover every conceivable subject, and reach quite inconceivable heights. There is no difficulty in eliciting them either, for he is very garrulous, and always glad to have an opportunity for speech-making. He has been brought before classes so often now that he is quite prepared for it. Often, as I pass through his ward, he asks when he is to have an opportunity of delivering himself; and he is constantly preparing discourses upon the most diverse and abstract topics. In all the insane, the delusions, as we have seen, relate to themselves, and first to the condition of their own bodies and minds. You will remember this in the maniacal and melancholic classes, and you will discover it in this patient and in his class. He tells you that he is the strongest man in the world, that he has defeated all the noted pugilists, none of whom could strike him a blow; and he offers you an opportunity, which we will waive, of seeing how easily he can defeat myself. His health, he tells us, is "first-rate," and it is a singular thing how commonly paretics will answer the same inquiry with the same expression. Sankey, an English alienist, first called attention to this curious little point; I have often, in trying it, got the answer "first-rate" from eight or nine out of ten patients addressed, and I think you will be able to verify the result if you try the experiment for yourselves when we come to pass through the wards. This feeling of well-being and health marks the paretic to the end, and his contentment and happiness render his disease the least trying, although the most fatal, of the forms of insanity. Up to the last moment, when the patient cannot rise in his bed or move a limb, or swallow, he will tell you that he is first-rate, that his remaining in bed is only a matter of choice, and that he could rise and take part in the most active pursuits, if he so willed it.

In the patient before you the delusions by no means limit themselves to his strength and prowess. He is of great beauty and strength, to be sure, and has lived for millions of years, and made millions of money, part of which is invested in the building in which we are now visiting him. But it is rather upon his intellectual and artistic abilities and achievements that he prides himself. Apart from painting the works that have been

erroneously ascribed to Raphael, and with the exception of the Bible, which he wrote to oblige his friend Martin Luther, the most satisfactory outcome of his genius has been a series of plays which he published under the *nom de plume* of "Shakespeare." He tells you this with all earnestness and gravity, and proceeds to quote from his works, commencing rightly enough, but soon wandering off into disconnected nonsense. It does not do to accuse him of this, however, for he demands, with great promptness and some asperity, whether, having written the work in the first place, he is not privileged to alter it as he may see fit? He is a linguist too, as well as a *littérateur*, and boasts a thorough acquaintance with all the known, and several of the unknown, tongues. To Germans or Poles among the patients, he will occasionally address himself, using the most absurd gibberish, and complacently attributing their inability to understand him to their ignorance of their own language. He has matrimonial aspirations too: offers himself and tempting settlements to any lady who visits the ward, and justifies himself to us by asserting that his first wife—Queen Victoria—is undoubtedly dead, she having been stolen from him by the Pope some centuries since. For the rest, he is now the contented, self-satisfied man that you see, though at one time he was noisy and destructive and filthy. He imagines that he leaves the asylum whenever he wants to, and gives circumstantial accounts of his excursions and adventures. His imagination transforms the asylum dinner into one of many courses and ample accompaniments, and there is nothing to mar his happiness. He has the usual history of excessive venery, as, indeed, had the patient who preceded him.

CASE IV.—This is the last patient that I shall introduce to you here, for I think that it will be more to your profit to spend the time remaining in the wards, in closer examination of individual cases. I present him only that I may have a text for briefly calling your attention to a couple of points, in relation to the disease, which the other patients did not specially call out. In the first place, this man comes to us not simply as a patient committed for treatment and care, but as a prisoner under indictment. The crime charged against him is forgery, and it was not until his trial was in progress that suspicion of his insanity was suggested, and he was sent here for examination and report. He is a paretic, evidently, and his forgery, which was of a note or cheque, was, no doubt, committed under the influence of delusions as to his wealth, which he now manifests plainly enough. Many of our paretic patients come to us after arrest and appearance before the courts, and some after sentence even. The evidences of paresis, as you have seen, are not

greatly unlike those of drunkenness, and they sometimes lead to mistaken diagnosis upon the part of the finest police force, and even to misdirected therapeusis in the matter of clubs.

Where graver crimes have been alleged against them, they have usually been those of arson or of false pretences. The paretic is very apt to set fire to his residence with the view of replacing it by one better suited to his newly acquired wealth and position; or he may obtain goods upon false representations as to his solvency and ability to pay for them.

You will observe that this patient does not give a very definite summary of his wealth; he indicates its extent rather by comparisons than by dollars and cents. This use of the comparative is a common thing among paretics when they are speaking of their powers, or attainments, or possessions. They are richer than Rothschild, or "biger men than old Grant," and they are very apt to spell it with one "g," too, for the evidences of their disease find their way into their letters very speedily. Apart from the alterations in the handwriting consequent upon the loss of co-ordinating power, there are lapses in spelling and grammatical construction, even on the part of those who were before the most accurate. This, of course, comes from the lapse of memory, upon which the delusions also largely depend.

DISCUSSION ON PRIVATE LUNATIC ASYLUMS.

At a meeting of the South London District of the Metropolitan Counties Branch of the British Medical Association on January 21, Dr. Alfred Carpenter in the chair, Dr. Bucknill read the following Paper :—

The questions connected with this subject, which your worthy Secretary has requested me to introduce to you, are so numerous and complicated, that I must attempt some delimitation of them by asking you to consider, in the first place, on what grounds medical men generally are interested in the existence of private lunatic asylums, and in the laws under which they are established and to some extent regulated. If it be true, as is maintained in the most recently published work on lunacy law, that “insanity is a purely relative term, at times employed to designate *conditions of the mind*, which are only diseases in the same sense that general debility is a disease, or in the same sense that bodily fatigue or want of change of air are diseases, and that every passion and emotion may, in prolonged excess, be said to constitute a degree of mental disorder”—if this be true, I cannot claim for the medical profession the right to arrogate any authoritative judgment upon the manner in which such “conditions of the mind” should be dealt with. But if insanity be a bodily disease, then medical men have a clear right to discuss, and finally to decide upon, the proper manner of its treatment; and the necessity, utility, and management of private lunatic asylums clearly come within the scope of such a discussion. I think that not only the conviction of the profession, but the opinion of the public, will affirm the latter proposition, notwithstanding the operation of laws which have come down to us from times when insanity was thought to be something apart from disease—laws which have indeed been patched and enlarged as the crying needs of the time demanded, but which substantially deal with persons suffering from diseases affecting the mental powers in a different manner from that which is customary with regard to all other diseased persons.

The operation of these laws has tended, and still more and more tends, to sequester the insane from the care and treatment of the medical profession at large to render more and more perplexing, dangerous, and difficult the medical treatment of any single case of lunacy · to herd lunatics toge-

ther in special institutions where they can be more easily visited and accounted for by the authorities, and to create a class of men whom these authorities can make responsible to themselves for the confinement and detention of the insane, according to certain regulations, but whom they do not and cannot make responsible for their proper medical treatment. It would, I think, be an excellent subject for one of our future discussions to inquire to what extent the herding together of lunatics is beneficial or mischievous, even in those most creditably managed institutions for our destitute insane, which are more almshouses than hospitals—I mean the county asylums. But our present inquiry is restricted to institutions for the not destitute insane, institutions which certainly are not almshouses, and which I am prepared to maintain are not hospitals. In what manner shall we regard these places for the confinement and detention of diseased persons, and to what degree are we called upon to extend our feelings of professional brotherhood and sympathy to the men who own them? Surely, none of us can fail to feel and respond to the “strong claim on the kindly fellowship and protection of the whole profession” of all medical “practitioners” honourably engaged in the treatment of the insane, and surely we should deny and resent any “inconvenient and unfair aspersions which have been made upon their conduct.” But surely, also, there is a line of distinction to be drawn between the practitioner and the proprietor; and although fairness is due to every one, I do not see, unless perchance I may be the proprietor of an asylum, why I should be bound to extend fellowship and protection to every one of that class. To take a parallel instance: say that I am a ship-doctor, one of a most useful class of practitioners, towards whom we all feel the fullest professional fellowship. But I am also owner of the ship, or of shares in shipping; surely, I have no claim upon your fellowship as a shipowner. Doubtless the cause of the jumble of ideas on this subject which is entertained by the public, and from which the profession is not free, is, that doctors are generally associated with asylums, and asylums with doctors; but in reality the pecuniary interest of medical men in private asylums is much smaller than you would suppose to be possible. There are ninety-eight private asylums in England and Wales; and of these forty-nine—being just one-half—are licensed to medical men alone, the remaining half being licensed to lay men or to women, or to medical men in partnership for this purpose with lay men or with women. Moreover, of the asylums licensed to medical men, the proprietors of many of the most important ones are capitalists, or speculators, or trustees, or inheritors, or hilt-deep

mortgagees, to whom they are not licensed, and whose names do not appear.

There are, therefore, two classes of persons connected with private asylums who stand towards us in very different relations. First, there are the practitioners, whether paid by fee or by salary, to whom the whole profession owes kindly fellowship and protection; and, secondly, there are the proprietors of asylums, who may or may not be medical men, and whom we may fairly be allowed to criticise—whom, indeed, it is our strict duty to criticise—in the interests of our profession, of the public, and of those diseased persons whom they are permitted to hold in confinement.

Now, a great deal of misleading analogy has been drawn between the action of medical men, who in the ordinary practice of their profession receive payment in fees for their services, and that of the proprietors of lunatic asylums, who receive payment for the maintenance and detention of their inmates, which payment, in so far as it exceeds the cost of such maintenance, is their profit. I can perhaps scarcely do better, to illustrate this constantly recurring analogy, than by quoting two passages from recent works on the subject of lunacy law reform. Dr. William Wood, in his recent pamphlet on the *Lunacy Law*, expresses his opinion that “if care be taken that no person shall be improperly placed in an asylum, there is no serious wrong inflicted on him if one who has been admitted under these precautions *be kept some time after his apparent recovery* ;” on the ground, as he explains, of the possibility of relapse. Dr. Wood proceeds to say: “Unworthy motives are not attributed to the surgeon who prolongs his attendance on a patient who has broken his leg, and who thinks it his duty to watch and guard against imprudent and premature use of the limb, *though the bone has united*. Why should not a physician in charge of an insane person, and why should not the friends of a patient, have the same measure of justice meted out to them as is without hesitation accorded to the surgeon?” (P. 57.)

Now, without commenting upon the justification of one of the peccadilloes of private lunatic asylums, the detention of patients after their apparent recovery, it must be observed that any surgeon who did act in the manner supposed would most certainly have unworthy motives attributed to him. Only, to make the analogy fit the case, this surgical patient must be put in such a condition that he can in no way help himself, and he must also be supposed to be incapable of saying to the surgeon that he had had enough of him; and also it should be assumed of him that his surgeon was paid by a third party, whose interest it might be that the bone should not speedily unite—

of a child away from its parents, for instance, lying at an hotel. But, in reality, the fees of medical men, even under the old system of charging for medicines, are not profits. They are charges for work and skill made upon, and paid by, voluntary agents, whereas the profit of a private asylum proprietor is that portion of the payment which is in excess of the cost, and which is great in proportion to the diminution of cost, and valuable in proportion to its continuance; and, in the well-considered words of Mr. Wilkes and Mr. Lutwidge, reporting to Her Majesty on this very question, "We fear it must be confessed by all that, where profit is the aim, it will too generally be pursued to the prejudice of those from whom it is derived." (Report of Royal Commission on Lunatic Asylums in Ireland, 1858, p. 32.) Or, in the vehement words of Lord Shaftesbury: "This *vicious* principle of profit runs through the whole." "I have no doubt that in the majority of instances, where they are acting on that *abominable* principle of profit, they screw them down to the lowest possible point." (P. 100, Select Com. Report, 1859.)

I said that I should make two quotations to illustrate the analogy which is often drawn between the action of medical men in the open profession, and of men, medical or not medical, dealing with diseased persons in asylums. The second quotation is from a speech of the late Mr. Wakley. I quote from that work—full of information and suggestion in lunacy matters—*The Care and Cure of the Insane*, by Dr. J. Mortimer Granville, according to whose quotation from Hansard, 3rd series, vol. 59, Mr. Wakley, in August 1841, said, in the House of Commons: "I entreat the House to observe the operation of the law as regards lunatics. Suppose I have a relation who is possessed of a large fortune. I perceive certain eccentricities in the conduct of that individual. From the great affection I have for that relative, and the still greater affection I have for his property, I cause a commission of lunacy to be issued out, and, discovering him to be insane, place him in confinement. Then what motive of action is given, under the present system, to the person in whose charge the lunatic is placed? Why, it calls into operation the principle of selfishness common to human nature. The proprietor of the asylum will argue that he gets £400 a-year for the charge of the gentleman so long as he remains under that roof; and if he recovered, then he, the proprietor, would lose that annual amount. Suppose an honourable gentleman were to go a doctor and say, 'My liver is diseased, and so long as it remains so I will give you £100 a-year!' what motive in such case would be given to the doctor?"

The quotation proves how forcibly the situation was even then comprehended by this "clear thinker and bold speaker;"

although, to construct his analogy, he was obliged to suppose the existence of such an agreement as is never made in the open medical profession. I have heard that, in China, medical men are paid salaries so long as their patients remain in good health; but a stated income received from a patient during the continuance of disease is, so far as I know, a thing unheard of out of asylums. I beg you to observe that all I have been saying has reference to the unchanging, and I fear unchangeable, principles which underlie human activities. I might have a good deal to say on the details of asylum management, if I thought it needful or desirable to do so; but I desire to put aside every word which may be construed to have a personal reference, and to ask your opinion, on the broad ground of principle, whether it is right that diseased and helpless persons should be detained and confined in asylums for the profit of private individuals; the amount of that profit depending upon what these individuals choose to expend upon the comfort and enjoyment of their inmates, and its continuance upon the duration of the disease, or what they choose to think its duration. May I not fairly ask you to consider what can possibly justify the existence of these institutions for private imprisonment, owned and kept by private people, lay and medical, male and female; there being nothing like a parallel instance in which the liberty of Englishmen is submitted to such control? In former times, indeed, debtors were permitted to be kept in durance by sheriffs' officers; but a sheriff's officer was not quite a private individual, and the thing was felt to be a scandal, and was abolished. Control over the liberty of children is to a certain extent transferred from their natural guardians to schoolmasters; but this only lasts for a few months at a time, and the restraint imposed is a very different thing from the detention of a lunatic until he be discharged or die. But, the existence of these institutions being unquestionable, may I not further ask what good reasons can be given by medical men for sending patients to them? We know pretty well what the motives of relatives are for so doing: separation from and safe guarding of the patient, secrecy, and perhaps the hope of cure. But have we, as medical men, any clear knowledge of the medical treatment carried on for purposes of cure in these places? Have we, as medical men, any assurance that secrecy will be observed when it is right, and not attempted when it is wrong? Above all, can we have any confidence that when, with or without medical treatment, our patients have recovered in these places, we shall be permitted to know the fact? Or, if we should be so bold as to think that we have observed it for ourselves, are we sure that we shall not be contradicted and deceived? Are we sure that our

recovered patients will not be indefinitely detained, under the supposition that they only appear to have recovered, and may possibly have a relapse? Perhaps I may be wrong in the opinion that, under the best treatment and the most auspicious circumstances, patients do not often attain to perfect recovery in asylums, any more than they do so in fever hospitals; the last touch of treatment wanted being the cordial restorative of home or the tonic of liberty. But do not the proprietors of asylums often recognise the persistence of symptoms of insanity in patients who appear to us to have recovered, which no one else can observe? If the matter were not too sad and serious, I could amuse you by descriptions of the manner in which I have myself been kept at bay in my diagnosis of recovery; for although, upon sufficient evidence, you may make up your mind with certitude as to the existence of mental disease, it requires great pains and patience and knowledge of your people to avoid being misled as to the possible existence of symptoms which you may not be capable of observing or of denying. Suppose, for instance, that the proprietor tells you that your patient, who appears to have recovered, has had a slight stroke, with a little facial palsy and some slight mental obfuscation, which passed off the day before yesterday; or that he has had two or three slight epileptic seizures, and has been a little fierce and angry just after them; or that he hears voices at night and denies them in the morning—upon what principles of diagnosis are you to determine that the gentleman is drawing upon his invention for his statements, and that he will not be inconsolable should the relapse occur which he assures you that he is anticipating?

But, as I have referred, however slightly, to my own unfavourable experience, let me also say that I have met with and had the pleasure of knowing some men who are the proprietors of asylums who are as honourable and truthful and just as any men in existence; who forget their profits, and, as physicians, treat their patients with unfailing humanity and generosity and skill; whose doors are freely open for patients to leave with the earliest indication that change will be to the patients' advantage; whose asylums are somewhat like lunatic clubs, in which the residence of patients is to a great extent voluntary; whose excellent practice, were it general, would go far to redeem a bad system; and whose active usefulness must survive any reasonable and beneficent change in the lunacy law. Of the present position of such men or of such a man in such a system one can only say, "*Que diable allait-il faire dans cette galère?*"

But what to do?

In the first place, I may broadly state my opinion that no change of the law can be satisfactory which does not contemplate

the eventual abolition of all private lunatic asylums. The deprivation of the personal liberty of any of the Queen's subjects is an affair of the State, and must only be undertaken by the State. From that axiom there must be no flinching. Such asylums as I have last described may survive, under some other name, as voluntary retreats for persons of defective or damaged mind. For lunatics who must be confined against their will asylums ought to be provided by the State, and managed by boards of governors. Moreover, the care and treatment of quiet and harmless cases of insanity by the open medical profession in domestic life, as single, or double, or treble cases, ought to be encouraged by the law and its administrators, and not discouraged, as it is at present. It may be very convenient to Commissioners that the insane should be gathered together in large herds or groups; but it is not to the advantage of anyone else except the custodians; and the Commissioners must eventually conform to the requirements of the age, and prepare to inspect the treatment of the insane wherever it is most convenient for the insane to be treated. And the idea of making everything smooth and easy for official visitation, which reached its climax in a proposal that for the convenience of the Commissioners every asylum should be close to a railway station, must be replaced by wider views of official duty.

The discussion of the large question of certification may well be postponed to another opportunity; only I may observe that I think that no tinkering of the present certificate system will suffice to make it safe to the practitioner or satisfactory to the public. The medical man ought to be put firmly upon his right footing as the exponent of scientific opinion; and the action taken upon evidence of that opinion in so grave a matter as that of depriving a man of his liberty ought to be no less than that of the civil power, whatever may be determined for the best as to the judge, or the court, or to the form of inquiry.

Moreover, great changes are needful in the administrators of the lunacy laws. The Commissioners in Lunacy are administrators in the metropolitan district, and inspectors only in the remainder of England and Wales; and it is very certain that the worst asylums to be found in the country are under their immediate jurisdiction. If their Board is to survive a thorough reform of the lunacy laws they ought at least to resign the control of the metropolitan asylums, and to instal the justices of the peace of the counties of Middlesex, Surrey, Kent, and Essex in the same authority which the justices of the peace possess in all other counties, the Commissioners themselves exercising everywhere an uniform power of inspection, report, and superintendence. But a more extensive change is still more

needful and important, which would render needless this local and partial change. There are socially and logically but two classes of lunatics in the community—those who are destitute and those who are not; and there ought, accordingly, to be only two authorities to administer the lunacy laws, and two laws for them to administer, as they severally regard these two distinct classes of the insane. The present division of authority between the Lord Chancellor's Officers in Lunacy, the Commissioners in Lunacy, the Local Government Board and the Boards of Guardians, the Visiting Justices and Visitors of Asylums, the Boards of Clevedon and Caterham, &c., is intricate, confused, and mischievous. Instead of this, the Local Government Board, or the Minister of Health, when he is appointed, ought to be placed in authority over all subordinate authorities having control over the care and maintenance of all destitute lunatics; and the Lord Chancellor's Officers in Lunacy, or, to speak with more technical accuracy, the Lord Chancellor, with all his subordinate Officers in Lunacy, under the Royal Prerogative, ought to have authority over all other lunatics and persons charged with their care and control. This change would leave no sphere of action for the present Board of Commissioners in Lunacy, the members of which might well be distributed between the two new and enlarged authorities, half of them going to the Local Government Board, and half of them to the Lord Chancellor. Upon this basis, the details of lunacy law reform could be built up with symmetry, science, and effect; but, without some broad basis of this kind, founded upon a logical principle, any reform of the lunacy laws which we may expect will be but some tinkering of the old pot where the light of day most inconveniently shines through its rust-eaten sides. Be assured, however, that the longer reform is delayed the more comprehensive it will be when it does come; for the history of social politics is the opposite of that of the Sibylline leaves, and generally the longer you wait for it the larger it becomes. In the meanwhile be it our duty, both collectively and individually, to strive that this most pitiable and helpless class of diseased persons, from whom the profits of private lunatic asylums are derived, shall not suffer longer than we can help under the disadvantages of this worn-out old law. Sequestered as they have been from our professional care, they are still, as diseased persons, the proper objects of our interest and regard; and we owe it to them, not less than to ourselves and to our profession, to strive that the law which governs their care and treatment shall be conceived and executed in the spirit of benevolence, of the scientific knowledge of disease, and of the true relations which the ethics of our profession teach as being consistent with the true dignity and welfare of both medical practitioner and patient.

Mr. Nelson Hardy, Honorary District Secretary, read a letter from Dr. Lush, M.P., in favour of the abolition of private asylums.

The Chairman said that he protested strongly against any of the work referred to being thrown upon the Local Government Board. There ought to be a Minister of Health in this country, on whom should devolve the care of all institutions connected with the health of the people. He did not think that it was a matter that the Local Government Board could possibly deal with in a proper spirit. The medical profession should themselves take the matter in hand, and should press strongly upon the Government the views that were put forward lately by Mr. Powell in his address on Public Health, so as to obtain from the Government a recognition of the rights of the medical profession and the appointment of a Minister of Health. One of the things that should be placed under his care was the management of the insane. He supported the observation made by Dr. Bucknill with reference to the multitude of authorities that had the control of the poor lunatic. The expense that those authorities threw upon the State was much too large. He was taking part in the building of a third asylum for Surrey, to hold one thousand patients; and the requirements of the Commissioners and of the Local Government Board had been such, in his opinion, as to lead to an enormously increased, and he thought unnecessary, expense in connection with that building. He had strong opinions with regard to the herding together of large numbers of lunatics: still the law required it; but the sooner some of the lunacy laws were altered (which ought to be done by medical aid) the better.

Dr. Newington (Ticehurst) said that the question was not whether proprietors of private asylums had honesty of purpose, but whether they were obliged by law to have honesty of action—whether there was not a sufficient guarantee for their honesty. Several charges had been made against them. One was made some years ago, and it originated in some terrible facts. It was said, first, that sane people were shut up; and, secondly, that they were ill-treated by those who had charge of them. No doubt, previously to Mr. Warburton's Bill (he believed in 1828), there was a vast amount of wrong done. But since then there had been various select committees, and those charges were practically abandoned by all who had any right to speak in the matter, including Dr. Bucknill himself, the Visitors, and also the Commissioners. Even the philanthropists did not state that there was now anything like shutting up of sane people, or cruelty to those who were shut up. A third charge was, that the patients were detained after they were cured. If that had been true for many years, one absurd effect would be that the asylums would be blocked up. He would put before the meet-

ing a few figures extending over ten years, which he thought would put the case rather the other way. The average yearly residence in county asylums was in round numbers 32,000, and the admissions were 10,000—a proportion of $3\frac{1}{5}$. In the hospitals there were 785 admissions, and an average residence of 1,887; showing a proportion of $2\frac{3}{8}$. In private asylums there was an average residence of 4,445, the yearly admissions being 1,835; giving a proportion of $2\frac{3}{7}$. Thus, in county asylums the proportion was $3\frac{1}{5}$, and in hospitals and private asylums together $2\frac{3}{8}$. In other words, supposing the various classes of asylums were absolutely empty, and there were no deaths or removals, it would take $3\frac{1}{5}$ years to fill the county asylums; $2\frac{3}{8}$ years to fill the hospitals; and $2\frac{3}{7}$ years to fill the private asylums. Another view was still more convincing. The average residence in the county asylums was 32,231; the discharges and deaths together amounted to 8,893. The average residence in hospitals was 1,887; discharges and deaths, 786. In private asylums the average residence was 4,445; discharges and deaths, 1,856. These proportions showed that, supposing no more admissions took place for a certain time, it would take three years and seven months to empty county asylums; two years and five months to empty hospitals; and two years and four months to empty private asylums. He found also that there were nearly 12,000 more in county asylums than there were ten years ago. In hospitals there were five fewer patients than there were ten years ago. In private asylums there were fewer now than there were ten years ago by 237. That showed that there was neither a stagnation nor a tendency to block up. It had been said that proprietors of private asylums did not wish to cure their patients, because it was better to keep them as patients. The average rate of yearly cure was calculated by dividing the admissions by the cures; that was, supposing an asylum admitted one hundred patients in a year, and discharged forty-two, the rate of cure was put down at forty-two. The average rate of the cure of lunatic patients was between 38 and 40 per cent.; in private asylums it was about 32 per cent. Those figures, however, must not be taken alone. Dr. Thurnam brought out some tables, and Dr. Needham had followed, taking twenty-six or twenty-eight years of the more recent results. On the Select Committee of 1877, Mr. Wilkes, in his evidence, produced some figures which he had elaborated from reports of thirteen county asylums; and it was shown that 54 per cent. of the patients taken into asylums within one year of the seizure should be cured, and that between 5 and 7 per cent. was all that could be expected to be cured after the first year. To compare with these figures he had not any extended returns from private asylums, as these did not publish printed reports; and he had

therefore been obliged to take one hundred cases from his asylum at Ticehurst. Of these patients 31 were already cured, and 6 were patients that were curable; if 4 were cured, there would be 35 cured out of 100. That would answer the objection that there was not a wish to cure the patients. If the figures were read in a proper way the private asylum proprietors did as much work towards recovery as their colleagues did in the public asylums or hospitals. As to the question of self-interest, the great fallacy in all this argument was that, because a man's interest might lead him to do wrong, he was bound to do it. He did not see why private asylum proprietors should be necessarily wanting in honesty. A man's interest might lie one way, but there was no necessity for him to follow it. It was assuming that he had no moral integrity whatever. As to private patients, there were only about three thousand really private patients; a considerable number ought not to be placed in that category. For instance, at Grove Hall there were 452 soldiers, paid for by the Government, and who therefore ought not to be regarded as private patients. With regard to single patients, it appeared that the cures were 9 per cent. With regard to the originators of the charges, there were patients who always had grievances against the private asylum proprietors, and a few of these had lately abused them; but against their statements could be put the kindness shown by other patients. As to the lay newspaper writers, their experience must be borrowed, and their information came through the narrow channel of a few people. The medical profession must depend for most of their knowledge on what they were told by other people. A writer in a medical paper had started weighted with an old editorial tradition; but he (Dr. Newington) believed he had not had any practical knowledge of insanity to back up his theoretical opinions. He would answer Dr. Bucknill by quoting his opinions given before the Select Committee. He had expressed in his paper a wish to abolish private asylums. In answer to question 1,910 before the Select Committee, "Would it not be desirable to get rid of private houses by degrees?" he observed, "I should be very sorry to see them got rid of."

Dr. Bodington (Kingswinford) said that he desired to bear testimony to the endeavour which Dr. Bucknill had made to treat the subject in a moderate and temperate manner. A great deal of heat had been imported into the controversy, not by the private proprietors of asylums, but by agitators against them. It was very desirable that members of the same profession, occupying different callings, should treat one another with temper, moderation, and forbearance. Dr. Bucknill did not quite bear out his argument with regard to the analogy between

private asylum proprietors and their profits and ordinary practitioners and their profits. In all callings there were some dishonourable men, but it was hoped many more honourable ones. Dr. Bucknill first stated that a number of charges might be made against proprietors, and then he took as exceptions a certain number of honourable men whom he had known. If private asylums were to be defended, they must be defended upon the ground of the medical proprietors being equally honourable with the rest of the profession. It seemed to him hard that, because the present private asylum proprietors happened to be the incumbents of offices which had been handed down to them from time immemorial, they should be attacked as if they were a special race of pariahs not worthy to be associated with ordinary decent people. In the last report of the Commissioners there was some excellent testimony that medical proprietors of asylums were men of at least equal honour and equal sensitiveness to their honour with any other body of men.

Dr. Hicks said that he was one of the proprietors to whom Dr. Bucknill had referred. He was not prepared to hear all he had heard; but he was not surprised. He was anxious to hear what statements Dr. Bucknill was going to make, and what facts he was going to bring forward to support those statements. Dr. Bucknill had brought forward cases in support of the system of private patients. If Dr. Bucknill had any facts to bring forward he ought to have done so; but he had not. Two years ago he (Dr. Hicks) appeared, with Dr. Bucknill, to prosecute a medical man for keeping a single case. It was a case under the care of a private medical man, and Dr. Bucknill's report proved that it was a most detestable one—such as could not possibly have occurred in any private asylum in this country, and such as, he would venture to say, had never been reported in this country. He believed Dr. Bucknill had appeared on other occasions to prosecute cases of this kind; and yet he now stated that private asylums were most detestable places; that the proprietors were the black sheep of the profession; and that their patients should be scattered far and wide, leaving them without government, protection, or anything else. The private cases were not perhaps visited once a year, while the private asylums were visited six times in a year, and every possible contingency had to be reported to the Commissioners. Dr. Bucknill had told him, on the occasion referred to, that he would like to have a private asylum in the suburbs of London, but that the Commissioners would not sanction it. [Dr. Bucknill denied that he had said this.] Dr. Hicks said that he was a proprietor, and he did his utmost to act honourably, and had never given cause of complaint. There were also other pro-

prietors who had had no complaint brought against them; and yet Dr. Bucknill charged them with keeping patients longer than they ought to do, and that they did it from personal motives; that the proprietors had not attempted to discharge cases when they were cured.

Mr. W. G. Balfour did not think that the argument for and against private asylums was likely to do much good. Last session Mr. Dillwyn introduced into Parliament a Bill containing every one of the things which Dr. Bucknill had proposed as remedies for existing evils. He did not see what was the use of keeping up this sort of warfare. He would rather bring before the meeting a resolution that it accepted Mr. Dillwyn's Bill as a measure of reform in lunacy law, and that they should proceed to consider its clauses.

The Chairman said that the meeting could hardly take up that resolution, because no notice had been given. What they were discussing was Dr. Bucknill's paper. Any matters brought forward in the paper Mr. Balfour would be justified in opposing.

Mr. Balfour said that the meeting had before it a set of one-sided facts or half-truths. What Dr. Bucknill said about asylums was in a great measure true; but he had given only half-truths. He did not say how many patients the proprietors had for £40 or £60 a year, which would not pay for their keep; he did not tell of the good actions of the asylum proprietors. These statements that were being made were only agitating the public, and keeping the patients and the asylum proprietors in a state of dissatisfaction and discontent. He disapproved of the articles which had appeared in the *British Medical Journal* on the subject. A new Bill would be introduced next session, founded upon Mr. Dillwyn's. He suggested the appointment of a Committee to take Mr. Dillwyn's Bill into consideration.

Mr. Nelson Hardy said that they could not go off from the discussion of the paper read into another thing, which would require some time. There were two courses open: they might adjourn the discussion for a fortnight; or, on the other hand, after hearing Dr. Bucknill's reply, they might consider this discussion closed, and start on the next occasion with the consideration of Mr. Dillwyn's Bill.

Dr. Wood moved the adjournment of the discussion.

Mr. Bodington seconded the motion for the adjournment. He would ask Dr. Bucknill to acknowledge that he had made a mistake in the recent trial to which he had referred in regard to Vice-Chancellor Malins. He believed that the great majority of medical asylum proprietors were in favour of abolition. In that he quite agreed with Dr. Bucknill.

Dr. Bucknill entirely concurred in what the Chairman had said with regard to the Minister of Health. He had only mentioned the Local Government Board as the authority in possession; but, if the Government were determined to appoint a Minister of Health, it would be quite right that that minister should have authority over the destitute insane throughout the country. Dr. Newington's speech had made a great impression upon him. His statistics were exceedingly interesting and valuable; but there was a difference in the statistics of a large number of small institutions scattered over the country, many of which had neither clerks nor boards to regulate the movements of patients. He remembered a superintendent of a county asylum in the old days who got a reputation for a great proportion of recoveries; but, after a while, it was found that he had a certain number of patients whom he discharged as cured every December and readmitted them every January. He was very much struck by what Lord Shaftesbury said in his evidence in 1877, that they sent out a great number of patients on trial whom they never heard any more of. What became of them? They were certainly not understood to be cured. As regarded Dr. Hicks's statement, if he had thought fit to apply for a licence, the Commissioners in Lunacy would have been most willing to give him one.

The resolution for the adjournment was carried unanimously.

At an adjourned meeting of the South London District of the Metropolitan Counties Branch, on Wednesday, February 4, the discussion on this subject was resumed by Mr. W. G. Balfour, who read the following paper:—

At the last meeting of this Society, Dr. Bucknill fully explained to you what are regarded as the defects and shortcomings of private asylums and their proprietors. These defects and shortcomings are denied by asylum proprietors, who believe that they have no existence except in the lively imaginations of a few chronic lunatics, whose insanity is of a type that unfits them to associate in the same buildings with their fellows more honestly afflicted. With such conflicting assertions put before them, it is not a matter for wonder that the public have a dim idea that all is not as it should be as regards the care and treatment of the insane; that they readily pay attention to any description of a private asylum, however far-fetched, that is put before them in the lay or medical papers; and that they too easily believe what they hear.

When a veteran in lunacy like Dr. Bucknill throws the weight of his vast experience into the question, and, by writing and speaking, joins in the crusade against private asylums, not

only the public, but even our own profession, have their faith in the value of these institutions shaken, and entertain grave doubts as to the worth of their proprietors.

Unfortunately for all interested in the treatment of the insane, there is not one of the charges brought against private asylums and those who have to do with them which might not be true. Fortunately, however, for us all, these charges cannot be substantiated. Dr. Bucknill and those with whom he associates himself in this matter fail to distinguish between what might be and what is; hence the antagonism between them and the proprietors of private asylums. If we go to the root of the whole matter, we will find that the unsatisfactory state of the lunacy law gives origin to the question in dispute. This lunacy law, were it not for the honesty of the medical profession, could be so manipulated as to render insecure the liberty of any one of Her Majesty's subjects. It is perfectly possible for any person to be falsely sent as insane to an asylum, to be unjustly treated while there, and to be detained, even when properly confined, longer than necessary, if the lunacy law, and the lunacy law alone, were the protecting agent; and it is this possibility of wrong being done (that agitators lay hold of and convert into a reality) which furnishes the basis for all attacks upon private asylums and their proprietors.

We can excuse the public for being led astray in this matter; but, gentlemen, can we extend the same forbearance to members of our own profession, who seem to ignore the great glory of their calling, that its honour is above the law and prevents wrong-doing, for which the law makes, to say the least, most insecure provisions?

On the question of profit derived from keeping private asylums Dr. Bucknill expresses himself as adverse to members of the medical profession deriving gain from the treatment of the disease insanity in private asylums. I do not think he specified any particular gain obtained from the care and treatment of the insane in private asylums as an unfair gain; it seemed that any gain from such a source was wrong. From one point of view Dr. Bucknill's idea on this subject is highly laudable and deserving of our most serious consideration, whilst from another it is simply absurd. Dr. Bucknill will forgive me for pointing out that physicians, when they receive a guinea for a prescription, are not in the habit of calculating this guinea as the profit they derive for the paper and ink they use in writing the prescription. Of course the paper and ink used by the physician cost money; but so do bricks, mortar, lands, servants, food and clothing used in the treatment of the insane; and even the medical profession cannot entirely overlook the cost of such

things. Private asylums are to their proprietors neither more nor less than the paper and ink to the physician. In both cases it is the knowledge of the disease which is treated that is the source of income, and it is for this knowledge that payment is expected.

All the same statements and counter-statements on the subject under consideration will not allay the feeling against private asylums that exists in the minds of the public; and it behoves us, therefore, to see if by anything we can do we can give the public what it wants, and, at the same time, secure for our speciality that position which it ought to have. Would it not be advisable for asylum proprietors, instead of persistently refusing to recognise the defective state of the lunacy law, and being always ready to do battle for its defects by meeting charges unjustly brought against them, and for which the law alone is answerable, to turn to the public, and say: You think so badly of us and our asylums that you wish them done away with; we are quite willing that it shall be so; and, in order to help you, we advise you to go to Government and ask that the powers conferred on the justices of counties and boroughs to raise money for the purpose of providing accommodation for pauper lunatics in their respective districts should be extended, to enable the justices of counties and boroughs to raise money in like manner for the purpose of purchasing the private asylums and licensed houses, with all rights, &c., belonging to them in those districts? Such a proposal as this, coming from asylum proprietors, would show that they, at any rate, were willing to bow to the opinion of the majority, which in all cases of public weal must be followed; and, on this point, Dr. Bucknill and I are agreed, but we arrive at the same opinion by very different roads.

If, gentlemen, you agree with Dr. Bucknill and myself that it *may* be advisable to abolish private asylums as such, and hand them over to Government, and that we ourselves should take the initiative in this change, the transfer could only be made on strictly commercial principles, for asylum-proprietors have their rights as well as other people; and, in parting with their asylums, they would expect, and are entitled, to receive adequate remuneration for what they give up.

I would suggest that the price paid by the justices to the proprietors of private asylums and licensed houses for the said establishments ought to be determined by the value of the land, buildings, plant, etc., belonging to, and used in the working of, the establishments, and by a sum of money paid to the proprietors in lieu of goodwill. As a business transaction, the total sum to be paid would require to be one which, if invested

at fair interest, would return to asylum proprietors a yearly income equal to what they had when they parted with their asylums. Adopt this view of the question, and I can see no reason why the change of proprietary should not take place; at the same time, I can see for ourselves an opportunity of promoting the highest interests of our profession.

If private asylums become Government property, it would be necessary to allocate them into districts; and that the justices of counties and boroughs should appoint for each district a duly qualified medical man to act as medical director of the public asylums in those counties and boroughs, to generally superintend the management of all the asylums. The medical director so appointed should be responsible to the justices in general and quarter sessions, who would determine his salary, and provide him with such assistance as might be deemed advisable to enable him to discharge the duties imposed on him.

It would also be necessary that the officers, medical and otherwise, holding office in private asylums or licensed houses at the time of transfer of these establishments from the proprietors to the justices, should be continued in their offices. The salaries should be arranged between the said officers and the committee of visitors, subject to appeal by the officers to the Commissioners in Lunacy in the event of any salary offered by the committee of visitors being considered by them unfair. The decision of the Commissioners in Lunacy to be final. All officers so appointed should be entitled to the provision as to superannuation, grants, etc., at present in use in public asylums.

These two proposals, I submit, would, if carried out at once, raise the speciality to the front rank of medical services. A new and valuable appointment would be created, open to all connected with lunacy. The present medical proprietors of asylums would retain their original capital, and would receive Government appointments at fixed salaries whilst they were able to work, and a pension when incapacitated for further service. They would have independent positions, and be freed from much that, in discharging their duty, is at present distasteful to them. Last, but not least, they would be cleared of that unjust suspicion which now attaches to them, that they, and they alone amongst medical men, do professional work for gain, and gain only.

In order to place all private asylums in the country on the same footing, it would be necessary that Dr. Bucknill's proposal regarding private asylums in the metropolitan districts should be carried out; and for this purpose it should be enacted that

private asylums and licensed houses situated in the metropolitan district, and being under what is termed "the *immediate jurisdiction*" of the Commissioners in Lunacy, should be in future under the jurisdiction of the justices in their respective districts. In addition to the reason given above for such a step, there is another, and one of much greater importance to us as medical men. The law, as it at present stands, provides for the Commissioners in Lunacy granting licences within a certain area to persons to receive lunatics for care and treatment into their houses. The Commissioners in Lunacy interpret this clause of the law as conferring on them the power to refuse to license houses, notwithstanding compliance with all the requirements necessary before a licence can be granted. By this course of action they virtually establish a monopoly in the treatment of disease in the metropolitan district, and conserve to a number of our profession, and to them alone, the power to receive patients in that district. On this ground, we, as medical men, are bound to come into antagonism with the Commissioners, as it is our duty to maintain that we, and we only, are the proper persons to decide how and where our patients shall be treated.

Dr. Bucknill suggested that the Lunacy Commissioners and the Lord Chancellor's Visitors should be amalgamated. Such a step as this would, in all probability, be highly advantageous; and, in contemplating such a change, it might be well were we to try to have the Commissioners more largely represented by members of our own profession.

Thus far I have dealt with Dr. Bucknill's remarks mainly as they relate to the profession; they must also be considered as affecting the public. As before stated, any person may, under the present law, grant an order for the reception of any other person as a lunatic into a private asylum. A wife may give an order for the confinement of her husband, a husband for his wife, a servant for his master, or a master for his servant; even a complete stranger may sign away the liberty of a person regarding whom he absolutely does not know anything. It is quite possible, as stated by Dr. Bucknill, for a wife to be sent to an asylum without the knowledge of her husband; but I am at a loss to conceive by what power of reasoning he should imply, far less hold it up as a cause of complaint to you, that medical proprietors of asylums are responsible for such a state of things. Would he accuse the surgeons of any hospital in the country of wrong doing, because they receive into their hospitals and treat people who require treatment unknown to their relatives? Asylum proprietors have legal authority for such a step; and if, acting strictly on

this authority, they receive persons into their asylums, are they to be blamed because some of the relatives are ignorant as to where their friends may be?

There is a protecting agent which prevents persons from being unjustly deprived of their liberty by being sent as lunatics to asylums; for, before such a step can be taken, two medical certificates of insanity must be obtained. It is these medical certificates, which cannot, I am proud to say, be dishonestly bought, that are the safeguard of the public. That not one of the agitators can point to a single case of false certificates having been granted, and substantiate it, is only another instance of *the integrity of an honourable profession*. This, gentlemen, is the opinion we asylum-proprietors entertain as to how you do *your duty*; and I feel sure you will believe me when I say that, were it possible for the same person to be brought to us certified as a lunatic, we should refuse to receive such a case. Nevertheless, there still remains, as an inheritance from bygone days, the vulgar delusion that insanity is different from any other disease, and requires for its treatment isolation in some establishment which shall combine the properties of hospital and menagerie. Many things are concerned in keeping this feeling alive in the country; and I am sorry to see that the Commissioners in Lunacy, by objecting to persons, feeling for the first time that they are going insane, being received as voluntary patients into asylums, are helping to perpetuate such an unhealthy idea. The evidence given before the Select Committee of the House of Commons showed that, in regard to the law as it provides for the admission of persons said to be of unsound mind into asylums, twenty-eight witnesses were asked to state whether or not they considered that it was sufficiently stringent to prevent injustice from being done. Of the twenty-eight, twenty-five were of opinion that by alterations affecting either the order of admission or the medical certificates, increased protection would be afforded. In order that the public may have their desire fulfilled, that when any of their number go insane they shall receive not only treatment, but a legal right to be secluded from the world whilst undergoing this treatment, granted by some constituted legal authority, it would be well to provide that it shall not be lawful for any person to be received as a lunatic into any asylum except upon an order granted by a justice of the peace of the district in which the lunatic resides. Such order should be granted by the justice upon a petition subscribed by the party applying for the same, who must be a blood-relation or a householder, and of age, accompanied by a statement of particulars regarding said lunatic, and by certificates under the hands of two registered medical persons, neither

of whom should be related to the lunatic, or in any way interested in the asylum to which it is proposed to send the lunatic; and no superintendent of any asylum should receive or detain any person as a lunatic therein, unless there should be produced to, and left with, such superintendent such order by a justice, dated within fourteen days prior to the reception of the lunatic. Provided that the superintendent of any asylum might receive and detain therein, for any period not exceeding forty-eight hours, any person as a lunatic, whose case was duly certified by one medical person to be a case of emergency, thereby affording time to obtain the additional certificate and the order of the justice.

One of Dr. Bucknill's strongest accusations against private asylums is, that persons are detained in those places longer than necessary. This assertion has two sides to it, like everything else. It is just possible that what might appear to Dr. Bucknill, with only limited knowledge of a particular case, unnecessary detention would, to those most conversant with all the circumstances of the case, be not only necessary but essential for the safety of the individual whom it most concerns—viz., the patient. Even if an error in this way sometimes takes place, it is, as a rule, an error on the right side.

At present it is extremely difficult for asylum proprietors to advise continued detention when the friends of patients wish them to be liberated, although their experience tells them that the detention is needful; and I should think that they more frequently err in discharging rather than keeping persons in their asylums. Seventeen witnesses were asked by the Select Committee whether detention in private asylums was unduly prolonged, and of those ten admitted that it was possible and probable, and four that it might take place.

The transfer of private asylums to the Government would relieve their proprietors from all suspicion of wrongdoing in this way; and to make the public security more complete, it would be well to provide that in no case shall the powers conferred by the justice's order remain in force longer than the first day of January first occurring after the expiry of two years from the date on which it was granted, or than the first day of January in each succeeding year, unless the superintendent or medical attendant of the asylum in which the lunatic is detained, on each of the said first days of January, or within fourteen clear days immediately preceding, grant and transmit to the Commissioners in Lunacy a certificate to the effect that the detention is necessary and proper, either for his or her own welfare, or the safety of the public.

And as complaints were made to the Select Committee

regarding the difficulty there is for persons interested in lunatics obtaining access to them, and it has been pointed out that the necessary permission could only be granted by the person who signed the order for admission or by the Commissioners in Lunacy, it would be well to provide that it shall be lawful for any person, having procured and produced the certificate of two medical persons approved by the Commissioners in Lunacy, hearing that any lunatic may without risk or injury to the public or to the lunatic himself be set at large, and also an order from the Commissioners in Lunacy for the liberation of the lunatic, to require the superintendent of the asylum in which such lunatic is confined to liberate such lunatic. These suggestions are found to work perfectly well in other countries; they legally provide a valuable safeguard against unjust detention in asylums, and there seems no reason why they should not be used in England.

Dr. Bucknill advocates the individual rather than the associated treatment of the insane. I have seen both plans tried, and where they can be worked together they are productive of great good; but once admit that chronic and harmless lunatics should be removed from asylums and placed under private care, and (independent of the difficulties which would arise alike to patient and the profession) you implant into the country a source of evil for the present and the future which nothing will get rid of. The removal of chronic lunatics from asylums would result in the loss of one of the principal curative agents which asylum doctors possess; to increased taxation, as what is paid for chronic cases helps to balance the cost of keeping acute; to asylums becoming places where it would be impossible for sane persons to live for any length of time, without reverting to the old system of treatment with chains and whip, and to numerous other ills, which only those connected with asylums can realise.

The suggestions placed before you as a means of remedying some of the ills alluded to by Dr. Bucknill are only meant to furnish a basis upon which a measure, partly of reform and partly of alteration, might be constructed. I have tried to put matters relating to private asylums and their proprietors, complained of by those who are opposed to them, in their true light. I have pointed out that the insinuations which are being constantly laid before the public against private asylums and their proprietors are founded on a defective state of the lunacy law, and not on faults attaching to the asylums, or to those to whom they belong. I sincerely trust that, if accusations are brought against asylum proprietors in the future, they will be individual and specific, in order that they may be answered; and where

defects exist having their origin in the lunacy law that the lunacy law may bear the blame.

Dr. William Wood had moved the adjournment of the discussion because he thought that Dr. Bucknill had not been sufficiently understood. His paper had been read, not as a voluntary communication, but in response to a request from the Secretary of the district. The paper must, then, be looked on as the production of a literary athlete, rather than of an eminent physician attacking his professional brethren. With regard to the proposed abolition of private asylums, he would ask, Who are those who wish that private asylums should be abolished? It would scarcely be said that the patients themselves would wish it as a rule. No doubt there would be exceptions; but these would abolish asylums altogether. It certainly would not be the friends of patients, because they were under no kind of compulsion to make use of the asylums; and, as regarded the public generally, it could not be pretended that any case had been made out to rouse them to action. It must, then, be the generally philanthropic desire of the literary profession to protect the oppressed, which in fact personated public opinion and asked for the abolition of private asylums, not because they had disregarded the claims of the public, but lest they might be tempted to take unfair advantage of the powers entrusted to them. He contended that private asylums, far from being deserving of obloquy, were entitled to the gratitude of the public, for they had rendered an important service in providing the means of treating the insane of the upper and middle classes. Dr. Bucknill had expressed the opinion that "the deprivation of the liberty of any of the Queen's subjects was an affair of the State alone;" this observation, however, applied with precisely the same force to public asylums, whose authority to receive patients was identical with that of private asylums. He admitted that the deprivation of the liberty of any of the Queen's subjects was an affair of the State alone. The State had availed itself of the services of private individuals, and by legislative enactment had directly authorised them to take care of insane persons, for whose safety and treatment there was no other provision. It had also the aid of private individuals in such part of the duty of maintaining the safety and integrity of the empire as the Government thought could be better carried out by such means. All governments had availed themselves of private assistance, even in the most important of their functions; and so in the case of insanity they had availed themselves of the assistance of private asylums, and in fact directly so until recently, in the charge of what were called criminal lunatics in Dr. Lush's asylum at Salisbury, and up to the present time in the charge

of insane soldiers in Dr. Stocker's asylum at Bow. The proprietors of private asylums were not so foolish as to expect that they would be maintained for their own personal benefit, if the Government had reason to believe that the work would be better done under some different system; but they would ask that, if any such good reason could be shown why in the best interests of the public they should be abolished, their past services should be fairly considered.

Dr. Hack Tuke said the most salient feature in Dr. Bucknill's paper was, that the time had come for abolishing private asylums. He supposed that, in the abstract, the State had the right to interfere to abolish them, and therefore it became a question of expediency; and this would depend on whether there was a very great abuse or any strong public feeling against them; and on the feeling of private proprietors themselves. He thought the time had come for some radical change, such as transfer to the State; but it should not be on the ground of proved abuse. It must be on that which really lay at the bottom of public feeling on the subject—the undesirableness of helpless persons being confined against their will by those who derived profit for keeping them. However little this could be proved to end in abuse, it had become expedient to contemplate a change; and this was greatly facilitated by the readiness of the proprietors themselves to yield to public opinion, provided proper compensation were made. He thought Mr. Dillwyn's Bill, if modified, might possibly prove satisfactory both to them and to the public.

Dr. Rayner said Dr. Bucknill had spoken of lunatics being "herded together," but this happened more in public than in private asylums, and was due to want of a sufficient number of medical officers.

Dr. Bodington advocated the abolition of private asylums on the ground that it would be beneficial both to the public and the proprietors, who, of course, must be fairly treated.

Dr. L. Forbes Winslow said: I have come here this evening in consequence of seeing the prominence which has been given to the last discussion in the daily press. I think it only proper that in such an important matter both sides of the question should be freely discussed at your meeting. I am, therefore, glad of an opportunity of doing so.

There are few subjects that can engage the serious attention and consideration of the friend of humanity of more importance and at the same time of more painful interest than the condition of the insane.

The feelings of everyone who is in the enjoyment of that greatest of earthly blessings, the *mens sana in corpore sano*,

are enlisted on behalf of the poor soul who, bereft of nature's light and guide, is degraded below his species, and reduced to the level of the beast which perishes.

† Man's boasted prerogative denied, the hapless lunatic wanders, frail, helpless, uncared for, on the shores of this great universe, depending for very existence upon the sympathy of those more fortunate. But, alas! too often those under whose supervision he has been placed, instead of being assisted and aided in their sacred mission to win him back to light and reason by kindness and protection, are harassed and interfered with in their work by unjust accusations and groundless assertions on the part of some persons who are strongly prejudiced.

I approach the consideration of the subject in no unfriendly spirit with the gentleman who opened the debate on the last occasion. Dr. Bucknill is one for whose opinion I have always entertained the greatest respect and esteem, and from his world-wide reputation and skill it is with a certain amount of apprehension and diffidence that I find myself, as I do on this occasion, diametrically opposed to his views. I trust, however, that any remarks I may make this evening may be accepted *ex pleno animo*, and in no other way. The question of the abolition of private asylums is one which from time to time has cropped up, generally as a rule after some sensational case of lunacy which has occupied the attention of our law courts, and has been made a *bête noire* for attacking these institutions and their proprietors. It is an extraordinary fact, however, that in all the recent great lunacy trials private asylums have come out of the attack without a single impeachment against them, whilst their proprietors remain unspotted and unscathed. Notwithstanding this the cry is still for their abolition. For many years committees of the Houses of Parliament have sat at various intervals to discuss private asylums and their management. I hold in my hand a pamphlet entitled *The First Annual Report of Madhouses*, made in the year 1816, and ordered by the House of Commons to be printed April 26, 1816. This is very rare, and I shall be happy to pass it round, for the perusal of the meeting. It is not my intention to consider in detail the various Acts of Parliament which have been passed since this period; suffice it to say, that mainly to the exertions of Lord Shaftesbury we have our present Act 8 and 9, and which many attempts have been made to upset. I think, however, I must draw your attention to the late Committee of the House which sat two years back. After various allegations and accusations had been brought against proprietors of private asylums, and the evidence had been heard *pro* and *con.*, the following appears in the report of the

Lunacy Committee as a result of their investigations, that no *mala fides* had been proved against the medical proprietors of private asylums. After this the matter should have ended, at least for the present. It has, however, been again brought forward with renewed vigour and renewed opposition. In the year 1859 Lord Shaftesbury gave evidence before the then sitting Lunacy Committee which was condemnatory of private asylums: "At present, from a variety of causes, the licensed houses are in a far better condition in every sense of the word; more is expended on them by the proprietors, and I must do them the justice to say that the change is very great; and so far as the evidence I gave in 1859 is correct I should not give it now. I can speak in high terms of many licensed houses and their proprietors; but I will add that, if you relax your vigilance ever so little, whether it be of licensed houses, or of hospitals, or of county asylums, the whole thing will speedily go back to its former level." These are the words and the opinion of one for whom we have the greatest respect, as he speaks authoritatively on the question.

I am not here this evening to defend our Act of Parliament, but to endeavour to show that we perform our duties in a right spirit. Is it just that the proprietors of private asylums should be held up to opprobrium? Individually speaking, which may also be taken as the opinion of those physicians and surgeons who are the licensed proprietors of private asylums, I say that when it can be proved that we have detained patients in our asylums longer than is absolutely necessary for their welfare and cure, or have received them when we ought not to have done so, so soon, I say, erase our names from your medical associations, strike us out from being members of our medical corporations, deprive us of those diplomas which we have so honourably obtained, and of those degrees which we have earned—banish us, I say, from society, and leave us to grovel about the earth as a disgrace to humanity; therefore, anyone who so insults medical proprietors of private asylums insults the whole of the profession. For have we not studied at the same medical schools? Do we not hold the same degrees? Have we not had the same medical teaching, the same moral and social training, as you? Have we not all the same feelings and desire to act honourably? The poor unhappy lunatics are not now chained like felons to some foul pestilential dungeon, there left to the gaze of those anxious to gratify a morbid curiosity. Gratitude and immortal glory must be given to those who exposed and laid bare these frightful atrocities, and so assisted the physician "in ministering to a mind diseased," and those names will stand

prominently and most honourably forward in the history of civilisation. Philanthropy was never more needed or employed to better purpose.

I have no wish or desire to attempt to suggest legislative measures for private asylums ; suffice it to say that I shall hail with pleasure any clause in the new Act which shall be of itself sufficient to protect proprietors from a possibility of accusation. I have simply come herestung to indignation with the unjust stigma, and to maintain and protect what is dearer to an Englishman than his life, his honour—this I have come to-night to vindicate.

Who steals my purse steals trash.

But he that filches from me my good name
Robs me of that which not enriches him
And makes me poor indeed.

Dr. Bucknill, in reply, read extracts from the evidence of Mr. Balfour before the Select Committee of 1877, before he became the proprietor of a private asylum. Mr. Balfour said : “ Private asylums are the property of individuals who derive large incomes from keeping them ; it is the interest of the proprietor to have as many good paying patients as possible in his house ; it is not his interest to get rid of patients who pay well ; and, as the law is, it is as nearly as possible impossible for any person to get out of a private asylum without the sanction of the person who signed the application, should the person who signed the application be unwilling to apply for the discharge. There are thus two things against the persons getting out ; the one is the desire of the medical officer so to keep them in the house, the other is the unwillingness of the relative or the person who applied for the admission to take him out.” Mr. Balfour’s account of that element of asylum-life upon which the good or ill treatment of the patients most depended was even more instructive. After telling the Committee that “ the language of attendants is often coarse and rough, and the patients get pushed about in a rough way,” Mr. Balfour replied to a question as to whether the proprietors of asylums are generally willing to give such pay as will secure them good attendants, “ They take men as cheaply as they can get them ; the cheaper they can get attendants into the asylum the better for them, because it is so much more gain.” Much had been said of the advantage which the superior secresy of private asylums offered to the upper classes. There was no more privacy in private asylums than in hospitals for the insane, if so much. On the other hand, there was such a thing as improper secresy. And if private asylums had no advantages

over hospitals in respect of secrecy, they were under every disadvantage in respect of the temptations to detain patients unduly, to neglect corrective treatment, and to exact the uttermost farthing which the patients or their friends could pay. He was extremely sorry for those professional men who, having sensitive feelings as to professional honour, were engaged in keeping private asylums; and he heartily wished them success in any attempts they might make to escape from their embarrassing position. He had made no attack upon professional honour or professional duties, but simply upon the business of keeping lunatics for profit; and that it was a business was proved by the disreputable discount business which existed until it was stopped by law, and by the still existing system of letting out attendants on job, and taking half their wages, and also by the system of requiring long notice before a patient could be removed from an asylum. He knew of a patient at the present time in a private asylum, the proprietor of which had demanded six months' notice before the patient could be removed, although such removal had been recommended by the authorities. It was quite a mistake to say that Lord Shaftesbury had changed his opinion about private asylums. What he had said was, that the present generation of asylum-keepers was better than the last. It was also an inaccuracy to state that the verdict of the Select Committee of 1877 had been in favour of the private asylums. The Committee, in their report, recommended that legislative facilities should be afforded by enlargement of the powers of magistrates or otherwise for the extension of the system of public institutions for all classes of the insane, by which means they considered that the demand for licensed houses for the upper and middle classes would cease. The meaning of the Committee was clearly that, in their opinion, it was not desirable to abolish private lunatic asylums immediately; but that public asylums for the upper and middle classes should be established, by the operation of which, through the spontaneous selection of the public, private lunatic asylums would be starved out of existence. Dr. Bucknill, in conclusion, thanked the members for the patience with which they had listened to opinions which he would willingly have made more agreeable to them had it been possible to do so. Some one had said in the meeting that there was really no public opinion on the matter; but, in May last, Mr. Cross, the Home Secretary, said to a deputation on the Drunkards' Bill that "there was a great feeling at the present moment throughout the country against private lunatic asylums altogether."

COMMISSION OF LUNACY ON THE
REV. W. BASSET.*

AN inquiry into the state of mind of the Rev. Walter St. Aubyn Basset, of Treharrock, St. Kew, instituted by Mr. G. L. Basset, of Tehidy Park, near Camborne, brother of the alleged lunatic, was opened on Tuesday, February 3, before Mr. W. Norris Nicholson, Master in Chancery, at Brislington, near Bristol. The petitioner, Mr. G. L. Basset, was represented by Mr. Arthur Charles, Q.C., and Mr. Pitt Lewis, of the Western Circuit, who were specially retained by Messrs. Domville, Lawrence, and Long, of London. The respondent was represented by Mr. Bucknill and Mr. Kingdon, of the Western Circuit, who were specially retained by Mr. George Browne Collins, solicitor, of St. Colomb. The Rev. St. Aubyn Basset, the respondent, occupied a seat in court, and was accompanied by Mrs. Basset. The witnesses in attendance filled a large room, and among those who were subpœnaed were Lord Falmouth, the Hon. and Rev. J. T. Boscawen, Dr. Barham, and many other well-known persons.

The Master opened the case by briefly informing the jury that they were empanelled to decide whether Mr. St. Aubyn Basset was of unsound mind and incapable of managing his affairs; and they must decide "yes" or "no" upon the whole question. Their verdict must be that of at least twelve (among twenty-one), and they would have the advantage of a personal interview with the alleged lunatic.

At Mr. Bucknill's application all witnesses, including the professional men subpœnaed, were ordered out of court. Mrs. Basset, by consent of counsel, retained her seat.

Mr. Collins, in stating the petitioner's case, said the defendant, the Rev. Walter Basset, was born in December 1835, the fourth son of Mr. John Basset of Tehidy. In July 1843 Mr. John Basset died by his own hand, and his eldest son, Mr. John Francis Basset, entered into possession of the estates, and remained in possession until February 1869. He was succeeded by the second son, Arthur, who had been in the army; but for thirteen years before the time when he succeeded to the estates had been under restraint at the asylum of Dr. Newington, in Sussex. He died in May 1870, and Mr. Gustavus Basset came into the property, and was still in pos-

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session. At the time of Mr. Arthur Basset's death Mr. Walter Basset was rector of West Buckland, Devon. He resigned his living, was married in December 1872 to Miss Ellen Pyne, and in January 1873 bought the estate of Treharrock, in North Cornwall, where he resided in October 1879. Mr. Gustavus Basset married, in 1873, Miss Ellenhurst, and an heir to the estates was born. In March 1879 the respondent began writing a series of letters, chiefly to the family solicitor, Mr. Lawrence, which contained very remarkable disclosures. He was under the belief that he was being followed about by enemies of his family, and that his mother's family and other relatives were inimical to him; that a large number of persons in the kingdom were emasculated and sought to reduce others to the same condition; that a person named Arch, well known in connection with agricultural disputes, and other persons, of both sexes, were employed by persons who were in a conspiracy, the object of which was to lead people to reduce themselves to idiocy by excesses, and that they were hanging about his place with designs on him. He said Dr. Newington, of Ticehurst, Sussex, employed these people with the object of getting people reduced to idiocy, and that Lord Falmouth was in league with them with the object of ruining the Basset family. The defendant wished Mr. David Bain and Mr. Hendy, county magistrates, the Hon. and Rev. J. Townsend Boscawen, Lord Falmouth, and others, to be put under restraint. He said he believed his second brother was alive. On the 8th of April he asked the family solicitor to send some one to Tehidy to inquire into the state of mind of his brother, saying that his brother was being reduced to idiocy, but that nothing would be said until his son came of age, and then he would be declared an imbecile. He wrote to Dr. Newington saying he had been annoyed by a person he called the "Kitten," saying she had threatened his wife's life. He also wrote to the family lawyers saying he wanted the conspirators "respectively" killed. He sought to obtain the insertion of an advertisement in the *Times* cautioning householders against persons he called Hazler, the Kitten, and others, who, he said, gained access to houses with the object of making disclosures respecting members of the household. He wrote a letter to be sent to the Bishop of London, warning his lordship of a social evil. Other letters contained warnings to his brother that relatives were engaged in the same object as that of the conspiracy, and in one he said his brother, if he would not take his advice, ought to be made mad as fast as possible. Arch, he thought, "should be killed," at a cost of about £20. In a letter to the Chief Constable of Cornwall, he asked that, as he had made a communication to the Home Secretary respecting a

family of high position in the county, a policeman might be placed at his house. This state of things continued till October, and defendant then applied for summonses against Lord Falmouth and others for the alleged conspiracy. He next called on another clergyman, and warned him of Lord Falmouth as having been concerned in the death of two of his daughters who had died abroad. Subsequently he went to a dangerous cliff on the coast, near his house, and searched it for the "runners," armed with a pistol and knife, and also sent to a huntsman asking him to bring over the hounds to find out where they lay. He eventually went to Tehidy, and there used expressions which justified the belief that he was dangerous to his nephew. Medical men were then consulted, who certified him to be insane.

The defendant was here questioned by the Master, and he in effect reiterated the curious statements made in the letters. He talked connectedly, and explained that the only expression he had used with respect to his nephew was: "This property will come to me when that brat is dead." The "runners," he informed the Master, went about in towns with hoods over their heads. He had not been persecuted since he had been at Dr. Fox's, but he believed the people were still about.

William Fleet, inspector of the Cornwall police, stated that in July 1879 Mr. Walter Basset came to his station and said he wished his premises at Treharrock watched, as there were a lot of people about who wanted to do him an injury. He said they were always about, inside and outside of the premises, at night, particularly moonlight nights, and that he could not understand how they got there. He said he knew one who came there, and it was a previous owner of Treharrock, Mr. Hambly. Witness replied, "I understood that he was dead," and defendant said, "It's nothing of the sort; he is about my premises every night. It was reported he was dead, and there was a funeral ceremony, but the coffin did not contain Mr. Hambly." On the 26th of July witness, in consequence of a telegram he received from respondent, went to Treharrock. The respondent repeated his former complaint, and said one of the surveyors of the Ordnance Survey was at the head of it. He said he had a brother who was under restraint, and that the keeper ill-used him.

Cross-examined by Mr. Bucknill: Treharrock is in a lone part of the country. There was nothing unusual about his complaining that there were persons about the house. Others have made similar complaints. Mrs. Basset confirmed Mr. Basset's statement as to that.

Whether right or wrong, then, she confirmed her husband's statement?—She did.

Cross-examination continued: I did not communicate these things to the petitioner's solicitors until they came to me. There were persons surveying in the neighbourhood who would be about the house; it was their duty to be there. Had these not been Government men it would have been curious. I never heard that they took the keys of their own accord and went about the place. Mrs. Basset did not tell me they took the key of the garden and walked about where they liked. She did say they went just where they liked. Had known Mr. Walter Basset three or four years, and never heard him use a threatening expression to anyone. I knew before July that Mr. Basset was eccentric, and of late he had become more so.

Re-examined by Mr. Charles: I saw Mr. Walter Basset frequently, and I think he has been getting worse lately. He did say that the chief surveyor was a man named Elford, one of his late father's former keepers.

Defendant, contrary to the advice of his counsel, persisted in making a statement. He quite denied ever having said anything about Mr. Hambly, or, as far as he could remember, mentioning his name to the policeman. There was a joke in the house which he did not believe in, which was that Mr. Hambly's ghost was in the house. The chief constable of Cornwall was a friend of the Boscawen family, and this man had been got to cook up a story.

Mr. J. R. Collins, solicitor, of Bodmin, and clerk to the Treague Divisional Bench, in the county of Cornwall, stated that on the 2nd of October Mr. Walter Basset came to his office and said he wanted some people summoned. He sat down at intervals, and at intervals walked about the room, at the same time making a disconnected statement to the effect that Dr. Newington, of Ticehurst, Sussex, was employed to get him put into a lunatic asylum; that he was followed about by a woman whom he called the "Kitten," and a man named Hazler, who were trying to find out his mode of life, and using means to get him put under restraint. He said Lord Falmouth lived at Mercyworth, near Ticehurst, and used to drive over with his friends and have the lunatics exhibited for their amusement, and that his brother Arthur was subjected to that. He wanted summonses against Lord Falmouth and the Hon. and Rev. J. T. Boscawen, as they were conspiring to get him under restraint. He made other statements respecting the Hon. and Rev. J. T. Boscawen and Lord Falmouth, and said the Marquis of Camden and Ching got up charges of treason felony against rising young men to get rid of them; also that various other persons had been got rid of. He then stole away into Mr. Collins's private room, and when witness followed him he was looking under the bed,

and gave as his reason for going there that he was looking for Arch. He named various persons who had died very mysteriously, said he would spend a lot of money to get Dr. Newington killed, and that people of his had been about Treharrock all the summer. Dr. Newington, he said, cruised on the coast in a yacht during the daytime, and landed at night. He wished to prosecute for conspiracy to get him and his brother under restraint, and included his brother's servants. He also stated that Mr. E. C. Marriott, the agent of the Basset family, was put into a position of trust in connection with the estates to do them harm, and that he introduced his eldest brother to loose people for that purpose. Witness humoured Mr. Basset as he had a very solid horsewhip with him. He suggested to him to state all the facts in a letter and received a letter naming the following persons whom he wished to be examined:—Dr. Newington and party, the “Hare,” “Bogus” Noakes, Mr. Hazler, the “Kitten,” and others; the Elmhursts, Mr. Moreton, two Misses Price, Lord Falmouth, the Hon. and Rev. J. Townsend Boscawen, Mr. Marriott, and Mr. George Williams.

The defendant again sought to make a statement, but was restrained.

Mr. Bucknill: These facts are come upon us entirely by surprise, and you can well understand my client, the only person who can put the other side of the matter, wishes to make a statement. It is an extremely painful and unfair position for my client to be in.

Mr. Charles: I cannot allow you to make that remark.

Mr. Bucknill: You cannot stop me.

Cross-examined: I am a nephew of Mr. Collins, who is solicitor for Mr. Walter Basset. I did think defendant might do me harm if I annoyed him.

Did you look on him as a dangerous lunatic?—I thought if I had treated him brusquely he would not be able to control himself.

Can you give me any reason for not disclosing to your uncle, Mr. Collins, who you knew was Mr. Walter Basset's solicitor, these facts which you knew would be important?—I mentioned this matter to him, offering to go into the whole matter, but he said he had heard enough about it. I also spoke to Mr. George Collins's managing clerk.

Do you think it fair to Mr. Basset to come here and make this statement?—I don't offer any opinion. I understood from Mr. Walter Basset that he was under fear of being under restraint, and also of personal injury. He said he would spend a lot of money to get Dr. Newington killed.

Did you then think it necessary to communicate to any of his

friends after he had made such a statement as that?—I consulted with my father on the subject, the communication being made to some one at Camborne.

Did you not, after this extraordinary communication to you, write to Mr. Walter Basset expressing your willingness to take his case up?—I don't think I did. I never intended to do any such thing.

Did you write to Mr. Basset offering to take his case up?—I think not.

Would such a letter appear in you press letter-book?—I don't know that there is such a letter; if you had given me notice I would have produced the book. I am quite sure I never seriously intended to do any such thing. There was a letter from Mrs. Basset saying I had better not move in the matter at present.

The Rev. G. H. Somerset, Rector of St. Mabyn, said he knew nothing of Mr. Walter Basset until October 1. It was about eight o'clock in the evening when Mr. Basset called. He said there were a great many people going about after him, talked very incoherently about Mr. Boscawen, and charged Lord Falmouth with being concerned in the death of eight persons, including his own eldest son. He also said if he caught any of the people who were about him he should murder them. He had received no letter from Mr. Basset since he had been at Brislington.

Mr. Charles : It was not sent.

Mr. Bucknill : Does not the Act say that all letters of a private patient addressed to any other person than the Commissioners should be forwarded, unless it was prohibited and endorsed to that effect by the proprietor of the licensed house?

The Master : That has nothing to do with this inquiry, I think.

Mr. Bucknill : With my client's case it has. If the Act has not been complied with, who knows what letters have been sent or what letters suppressed?

The witness went on to state that in consequence of the defendant's threat he warned the relieving officer of the parish, whose duty it was to bring before the magistrates persons suspected of being wandering lunatics. Knew the defendant had a home and that he lived with his wife at Treharrock. Thought he was dangerous, and told his servant to see him safe out of the plantation. Did not communicate with anyone but the relieving officer. The relieving officer brought the defendant before the magistrates, but he was not sent to an asylum.

Robert Hudson, M.D., of Redruth, stated that, in compliance with a telegram he received from Tehidy on October 21, he

went there. He saw the defendant outside the house, and defendant told him there was a conspiracy against him, between Mr. George Williams, Mr. Boscawen, and others. An interview followed between Mr. Gustavus Basset and the defendant, and the latter insisted on his staying. Defendant said he thought it his duty to warn his brother that Lord Falmouth, Mr. Boscawen, Lady Molesworth, and others, were in a conspiracy against them, and had bribed all his servants with the object of making them idiots, and then locking them up in asylums. He also said Arch, the agricultural labourers' delegate, was in the same conspiracy, and that such wretches ought not to be allowed to live, as they were draining the life-blood of the best families of the country. Afterwards defendant requested him to take notes of what had taken place, as he intended shortly to take steps against his brother, and it would be very important.

In your professional opinion, is it safe for defendant to be at large?—I don't think I had sufficient opportunity of saying that. There were dangerous tendencies when I saw him.

Cross-examined: The defendant was outside the door when I saw him, and the door was locked in his face. The brothers met affectionately, and there were no dangerous tendencies about him. I have heard that a few days after this interview two keepers and two policemen went to the defendant's house, and took him to an asylum. I was asked to communicate what passed to Dr. Barham. Before I saw Dr. Barham I was asked to certify defendant a lunatic, and I did not. Both Mr. Gustavus Basset and Mrs. Basset asked me. I do not know that Mrs. Basset first suggested it. The certificate as to the defendant's condition was partly filled in by me, partly by Dr. Barham, and partly by Dr. West.

Have you heard that Mr. Basset was extremely anxious to prevent the defendant from going to live near Tehidy?—Witness, after the question had been repeatedly put, said there was a rumour of the kind.

Re-examined: I did not certify the defendant, because I thought it desirable that those who knew him best—one an old family friend and the other his medical attendant—were the best persons to do that kind of thing.

Dr. Barham, a doctor of medicine of the University of Cambridge, said he knew the defendant as a mere boy, but for some years saw nothing of him, as he was away from the West. On October 21 he had an interview with the defendant at the Royal Hotel, Truro. After a few minutes' ordinary conversation he said there were emissaries of the mad doctors all over

the country, seeking to inveigle persons into asylums, and that there were parties of them around Tehidy and Treharroek. He was of the opinion then, which he still retained, that the defendant was of unsound mind. He seemed to have very few ideas but these groundless and insane ideas, of the truth of which he was perfectly and honestly convinced.

Mr. Pitt-Lewis: Having these ideas, do you think he would be likely to act on them?

I think persons actuated by the belief that others are intending to do them bodily injury would seek to protect themselves. A man seeing another man behind a hedge might take a shot at him on the supposition that he was one of his enemies.

Cross-examined: The defendant asked me to come and see him again. He wrote to me afterwards, offering to give me a window as a gift to a scientific society I am connected with. He sent a poem on the death of the Prince Imperial at the same time. He has always been more or less of a poet. Ever since I knew him as a grown man he has been eccentric. I don't know that it was not until he came to live near Tehidy that those who advise his brother sought to put him under restraint. I have had experience of cases of madness. Hallucinations or delusions may exist at the same time with sanity.

Charles Augustus West, M.D., of Bodmin, said he had been the defendant's medical attendant for the last seven years. On October 23 he visited him at Treharroek. Defendant came in with his dress covered with mud, and said he had been searching for men who were constantly about his premises, who hid in clefts of the walls, were ubiquitous, and followed him about. Hearing that defendant had a pistol and knife in his possession, he said that made him dangerous, and that if it came to the knowledge of the parish officers it would be their duty to interfere. On Sunday, the 5th, he was summoned to Treharroek, and the defendant told him he had been searching for Arch and the other men under the cliffs.

By Mr. Bucknill: When I saw him on the 23rd, I had been asked to go and see him with a view to certifying him insane, and had arranged, but I went there on Mrs. Basset's invitation. I thought he was dangerous, because he had been searching on the cliffs for some one he thought dangerous to him, with a knife in his possession. Mr. Bolden, the Tehidy agent, asked him to sign the certificate, and he had received the fee. I did go to the house on the 23rd, when I went to certify, under the pretence of seeing Mrs. Basset. I saw her as a medical man, and she introduced Mr. Basset, being at the time quite in ignorance of the object of my visit.

As a matter of gentlemanly feeling, do you think that was quite the thing for a family doctor to do?—I knew Mrs. Basset would resist. I may have accepted their hospitality on that occasion. The delusions I have mentioned are not those on which I certified that he was incapable of taking care of property. There were other evidences. He told me on October 1 that he had bought an estate and had no money to pay for it.

That is not an evidence of lunacy, I hope?—He had no money.

Do you know that when he went to Treharrock he farmed and managed an estate of 300 acres?—He did.

Have you any reason to say he farmed like a lunatic?—I don't know how he farmed.

Do you know he conducted the transfer of the estate himself?—I don't know who did it. The reason he could not pay for the estate was that he had two estates on his hands at the same time. I don't know whether he managed the household affairs himself. Knew he formed a drive and improved the estate of Treharrock. He was a hunting man, but witness could not say whether he carried a gun until two years ago. Attended defendant in 1874, 11 times; in 1875, 14 times; in 1876, 5 times; in 1877, 16 times; in 1878, 4 times; and 1879, 6 times. I should say any person having a persistent delusion or hallucination would be insane. A person who fancied he heard voices would, in my opinion, be insane.

The foreman of the jury here communicated with the Master, and then stated that the jury were of opinion that enough evidence had been offered on the petitioner's side. They would be glad to hear Mr. Bucknill, and to know whether he could bring forward any medical evidence.

Mr. Bucknill declined to make any statement of his case till the counsel on the other side had concluded theirs.

Mr. Charles, after the expression of opinion by the jury, consented to call only one more witness.

Dr. George Henry Savage, medical superintendent and resident physician of Bethlehem Hospital, London, and lecturer on mental diseases at Guy's Hospital, stated that on the 16th of January he saw defendant alone for an hour and a quarter at Dr. Fox's. During that time he told him Lord Falmouth never changed and would go on living for ever, and on that based another assertion. He thought it an extraordinary thing that the friends of Lord Falmouth died, and referred that to the same origin as the juvenescence. He said his brother Arthur was sent to Ticehurst and made insane while there. He also said he was annoyed by the "runners" from Dr. Newington's. He argued that it would be to Lord Falmouth's interest that the Basset

family should be ruined, and said means were by one family ruining another by gambling; and said there was a conspiracy between Lord Falmouth and Dr. Newington. The opinion witness formed was that the defendant was suffering from a chronic incurable form of insanity, and that he would be dangerous to anyone he fancied was injuring him.

Cross-examined: Supposing Mr. Basset to be subject to these delusion for several years, but had ridden on the cliffs and carried a gun there, that would not shake my opinion that he would be a dangerous lunatic. If a man had been subject to these delusions for years, and had done no harm, my general opinion would be shaken. If he had conducted the affairs of his estate of 300 acres for years satisfactorily, I should say he was not insane. Notwithstanding this may be shown, I should consider Mr. Walter Basset to be a dangerous lunatic. In this case I do prefer my own opinion to any facts that may be proved. Delusions are not proof positive of insanity.

Re-examined: It would quite agree with my own opinion if I were told defendant had been getting much worse of late.

Mr. Bucknill said it would enable him to condense his case if the inquiry were now adjourned. He assured the jury that he would be able to satisfy them that, whether he had these delusions or not, the defendant had been managing his own affairs in a reasonable manner, and was still capable of doing so.

The Master adjourned until Wednesday morning.

SECOND DAY.—*Wednesday.*

Mr. Bucknill opened his client's case with an earnest and impressive appeal to the jury to consider the matter before them, with special reference to the doom with which his client was threatened. No man out of an asylum could imagine the agony of mind of one believing himself to be sane, who was placed in a madhouse. Ten thousand times worse than a gaol, the unhappy patient herded, slept, sat, and ate, side by side with raving maniacs, idiots, and imbeciles. To suggest that the fancies which had taken hold of his client were anything but fancies would be an insult to common sense. But the undercurrent of the whole of the letters which had been so much relied on was this, "I am afraid my brother and I are to be deprived of our liberty." There was always the warmest affection between the brothers, and there could be no doubt that in much of what had taken place the defendant had been actuated by a strong nervous sensibility lest the helpless invalid his brother was should be removed to an asylum. Throughout the

letters, however, there was apparent not the intention to do injury to these persons he suspected, but the fact that he invoked the assistance of the law. What stronger negative evidence could they have that he had never intended to attack any person? The statute never suggested that a harmless lunatic should be confined in an asylum unless he became a wandering lunatic, dangerous to himself or others. Lord Campbell said the Act was rather against than favourable to persons, physicians or not, who simply, because a person was of unsound mind, caused him to be confined in a lunatic asylum. A person to be placed in that position must be dangerously mad, and unfit to manage his own affairs. An inmate of the Agapemone was put into an asylum as of unsound mind, but was not dangerous; and she recovered damages for incarceration. Now, if he showed them further that since 1872 the defendant had managed his business affairs sensibly and straightforwardly, he apprehended they would willingly come to the conclusion that he must be set at large. Mr. Bucknill then proceeded to comment on the evidence, and in conclusion he appealed to the jury not—upon the evidence of opinion which had been described as the wildest and most worthless of all evidence—to consign his client again to the asylum. He sincerely hoped it would be in their power, and he was sure it would be a pleasure, to relieve him from that terrible position. He had done no harm to anybody; let him go back, as was his wife's wish, to reside with her.

Hannah Netherton, a charwoman, who had worked at Treharrock ever since the defendant had lived there, said that, as far as she had seen, he had always conducted himself to everyone courteously and kindly, and had always been able to manage his own affairs.

By Mr. Charles: In September I went to live at Treharrock as a servant. Before that I worked there occasionally. Some time before Mr. Basset was taken away he was under the impression that there was somebody about who was going to do him injury. A day or two before he was taken away he went on his hands and knees in the kitchen with an open knife in his hand. He did not say he would murder anyone. He remained in the kitchen, and sent some one to the mistress. Mrs. Basset said Mr. Basset got the knife in Truro to prune trees with. Had never told Policeman Thomas that Mrs. Basset said her master had been going all over the house with a knife in his hand. Had never heard such a thing said.

Re-examined: It is a lonely house. I have seen nobody about; but somebody threw a stone through a glass door into the study on Christmas Day.

Mrs. Emily Roberts, who resides at Trevinnick, St. Kew,

said she frequently visited at Treharrock, and had frequent opportunities of seeing Mr. Basset. She had never seen anything in his demeanour or behaviour to alarm her, and thought he was quite capable of managing his own affairs. She had never been afraid of him, and she often took her grandson there. Mr. Basset was very kindly disposed, and the child was very fond of him. The children went there of their own choice. Had many times seen defendant take part in the service. Had heard him say there were men lurking about the place.

By Mr. Charles: There was one of Mr. Basset's sermons that gave some offence to one or two parishioners. That was more than a year ago, and he had not preached since.

Mrs. Edith Basset, wife of the defendant, described Treharrock as a lonely place, surrounded by shrubs and woods. In all matters of business connected with the estate, and all money matters, Mr. Basset acted on his own behalf. The statements in counsel's opening address as to details of work she corroborated. She produced his farm book, kept by himself, and a number of letters written by him. Remembered going to Cambourne, when her husband went to Tehidy on the 21st of October. She remained there, because she was not on visiting terms there. The only objection there was when the estate at Crelloe was bought was that it was only six miles from Tehidy. Up to the time Mr. Basset bought a pistol he had no weapon but a large stick in the house. She thought something of the kind necessary. She had known of persons being about the house, and their house dog, her own dog, had been poisoned. Her husband was very distressed, when he returned from Tehidy, with regard to his brother's state. He used no threat whatever either against his brother or nephew; he was too grieved, and did not speak. When her husband was taken away they were on the point of going to Torquay. The chaise was at the door. Three men came up and asked to see Mr. Basset. She said, "He is writing letters," and showed them into the study. Mr. Basset showed them the means by which he thought persons got into the house. The servant said, "There are two or three other carriages there." She went outside and saw Dr. Fox and Mr. Bolden, the agent of the Tehidy estate, and another man. She had never seen him before except on the previous Sunday. The six persons went into the drawing-room and said, "We have come for Mr. Basset." She had had no previous warning. Mr. Basset was present. She sought to prevent his being removed. He was sitting in his chair, and the whole six appeared to take hold of him at once. They dragged him out of the house, threw him into a carriage, and drove off. She followed, and at Bristol asked Dr. Fox where he was going to take her husband. He

then gave his card. When they took him certificates were asked for, but they did not produce them. She and her husband both asked for them. She denied telling Dr. West that her husband had a pistol and knife in his possession. He had no pistol, and she knew him perfectly well. She denied *in toto* Dr. West's statements on this subject. It was not the fact that her husband's clothes were covered with mud, or that she said her husband had been on the cliffs, with a pistol and a knife, looking for men he thought were there. From the time she first knew her husband until he was removed she never knew him threaten any person whatever; quite the reverse. She was never away from her husband but one day from the time of their marriage to the time of his removal.

Cross-examined: On the Sunday before her husband was taken she did send two persons to search for her husband, who she was told had not been to church; but she did it because she was alarmed at Mr. Bolden, the agent of the Tehidy property, and a gentleman and lady in a carriage having been to the house. She sent for Dr. West, and did tell him that her husband had left the house to go to church, but had not gone. She denied telling Dr. West her husband had been wandering over the most dangerous part of the cliffs. Denied having gone to call up the groom to come to Mr. Basset a night or two before he was taken away.

Re-examined: I was not on good terms at Tehidy. It appeared to me Mr. Bolden came for some evil purpose. First he wanted to prejudice me against my husband, and then to get me to pity Mr. Gustavus.

John Beddoe, M.D., F.R.C.P., physician to the visiting magistrates of the Gloucester Asylum, said he visited Mr. Basset as to his mental state on Monday last. He found him expressing some views which he would call delusions. From what he saw the defendant was not a dangerous lunatic. It was possible for a gentleman to be possessed of the ideas Mr. Basset had for some years. If it were proved to his satisfaction that Mr. Basset had been in the same state since 1872, and had not grown worse, then he was capable of managing his own affairs. In his opinion it was possible and probable that Mr. Basset would hurt no one.

By Mr. Charles: It is pretty common for disease of this kind to be stationary. The disease itself is not uncommon. Did not know the fact of defendant having tried to institute proceedings would affect his belief. If defendant said, "I want to get these people respectively killed," he must know his meaning before he altered the opinion he had formed. If he had written that in July of last year, and had never written anything of the kind before, he would suppose the disease was progressive.

Re-examined: If I were told he said in all these letters which had been quoted that the defendant expressed a desire to take legal proceedings, I would be of opinion that he was the less likely to do harm. I carry a knife.

Dr. Brittan, M.R.C.S. and M.D. of Dublin, said he had considerable experience in matters of mental alienation. He saw the defendant with Dr. Beddoe at Brislington House. He made statements respecting the conspiracy and delusion. Witness questioned him about it, and cross-questioned him, almost leading him up to it, to see if he could evoke any expression of malevolence or intention against the persons named. All he elicited was rather a feeling of extreme fear than the desire of revenge or the intention to injure. The general conclusion he came to on the case was that Mr. Basset was a man who from an early period had not unnaturally had a dread of falling into the same condition as had been the case with certain of his family. Probably the morbid impression had got hold of his mind that there was a design to reduce him to the same state. He thought one must discount everything he said by the peculiar characteristic which marked the whole of the delusions. The expressions wishing certain persons to be killed or poisoned he thought were merely another form of saying he thought they ought to be put out of the way. If he thought them guilty of these crimes, he would say they ought to be put out of the way. Might have said certain persons ought to be hanged.

By Mr. Charles: I have experience of alienation. I am the inspector under the Irish Court of Chancery for patients in the Brislington Asylum.

Are you of opinion he is of sound mind?—No; certainly not.

Would you take the responsibility of saying he ought to be without control?—I should like first to know a great deal more than I have seen at present. Nothing I have seen or heard would cause me to say he ought to be under control.

The Master remarked that he should tell the jury the question was, whether Mr. Basset was of unsound mind. If the jury found him insane he might be placed under the care of a committee, who would have full discretion.

Mr. Henry Rogers, solicitor, of Helston; said he knew Mr. Walter Basset. He held a sale at Crellew in July 1879. Mr. Basset attended, acted on his own behalf, and carried on the business of a bidder the same as any other gentleman, without advice. Saw nothing to induce him to believe that Mr. Basset was of unsound mind. Mr. Basset bought the property for £2,255, which was not more than half its cost, and was a reasonable price. Had seen nothing of Mr. Basset before, and did

not imagine there was anything wrong. On the 7th of October he received a letter from Mr. Basset saying his brother, Captain Basset, or rather his brother's wife, Mrs. Captain Basset, objected to his being so near them, and proposed to withdraw £300 if he persisted in the purchase of Crellew.

Mr. Charles Pollard, of St. Kew, master of the North Cornwall hounds, said the defendant had been in the habit of hunting occasionally with his hounds. He behaved in the same way as other people. At the Wadebridge Farmers' Club dinner in 1878 Mr. Basset returned thanks for the clergy.

By Mr. Charles: He was not out last season or this. In 1877 and 1878 he was only out two or three times.

Re-examined: When he was out he appeared perfectly sane.

Mr. Wesley Grose, churchwarden of St. Kew, said Mr. Basset had been a subscriber to the North Cornwall Hunt up to this year. His behaviour when he was out was that of a sane gentleman.

Mr. John Vivian, St. Kew, said that at the sale of farm stock at Treharrock, on Lady-Day 1877, Mr. Basset was present and behaved as other people did. At church witness sat next him, and his behaviour was that of other people.

Cross-examined: Mr. Basset spoke in church one Sunday, and a Miss Woollcombe left the church.

Re-examined: She was hysterically inclined, and being amused by some one speaking, she could not suppress her laughter, and went out.

Mr. John Seldon, jun., collector of taxes for St. Kew parish, said he was collector 1877, 1878, and 1879. He called on Mr. Basset, who paid him by cheque. He once objected to the amount, but, when it was explained, paid. He also subscribed to the ploughing match.

Cross-examined: I saw him once a year.

Mr. Wesley Stephens, of St. Kew, had known Mr. Basset for about twenty years. In March 1878 he held a sale of furniture and farm stock for him, and received his instructions from him. He settled afterwards, and appeared to be well up to his business. There was nothing peculiar about him. Had seen him repeatedly since, and knew about his purchasing a horse.

Mr. Thomas Olver, J.P., a member of Olver and Sons, land surveyors and auctioneers, of Falmouth, was called, but the jury intimated that they had heard enough general evidence. Mr. Olver was withdrawn, and

Mr. Coleman, the tenant of Treharrock Farm referred to, was called. He said Mr. Basset conducted his own side of the bargain, and did it in a thoroughly business-like way. Did not get the best of it in that case.

When did you best him?—Not at all, sir. (Laughter.) He looked sharp after his own interests. I am always very pleased to see him.

By Mr. Charles: He has not been exactly the same this last year or so; but there has been very little change. For four or five years he has gone about just in the same way.

Mr. Bucknill asked if the jury would hear Mr. Collins's managing clerk, who had conducted business affairs with him for years. The jury consented, and

Mr. James Nicholls, who had been thirty years in Mr. Collins's employ, said he had seen a great deal of the defendant up to the last two or three years. In 1878 Mr. Basset brought his bank account, and said he thought there was an error, as it did not agree with his own account. He went to the bank and found by examining many hundreds of cheques that there had been an error. On another occasion he brought a complaint that Mr. Coleman had broken the covenants of his lease by over-cropping. He held several letters of instructions, which were perfectly lucid. In autumn of 1878 Mr. Basset instructed him about selling Treharrock. He sold it because the money would produce £400 a year, whereas the farm was only rented at £300. Witness produced the letters Mr. Basset had written since he had been at Brislington, which were handed to the foreman; and stated that in raising loans on his property, and also in every other business matter, he was very capable of managing his own affairs. He was a very good accountant.

Cross-examined: I saw him often, and he never alluded to the beliefs of which I have heard here.

Mr. Bucknill, in summing up his client's case, read letters written by Mr. Basset since he had been at Brislington, in one of which he said he should be prepared to go to any reasonable expense in this trial, as he was being tried for his reason.

Mr. Charles, on rising to sum up, said that but for an allusion by Mr. Bucknill to the action of Mr. Gustavus Basset in the case he would not have felt called on to make a statement which he now must make; but the reason why the defendant had been able to present his case with the advantage of such ability as that Mr. Bucknill had employed in his behalf was the generosity of Mr. Gustavus Basset himself.

The Defendant: He advanced £300 on my bond because I could not sell property. Certainly I should have been otherwise in a very awkward position, and it would have been very unfair.

Mr. Charles rejoined that it would have been very unfair. Proceeding to comment on the defendant's case, he upheld the action of Mr. Collins, of Bodmin, against the attack made on

him, and said Mr. Collins offered his uncle (defendant's solicitor) the information, and it was not accepted. It had been urged that defendant had done no one any harm, but he asked if every lunatic was to be left at large until he had done harm, and what the position of the family at Tehidy would have been when that happened. The impression on Mr. Somerset, from one interview, was such that if Mr. Basset's relatives had not taken care of him, he must have been placed in the county asylum. Why was it, he asked, that no person of Mr. Basset's own rank was called on his behalf? In the interests of his brother, Mr. Gustavus Basset had felt it his imperative duty to take the steps he had taken, and whatever the decision of the jury, he would accept it freely.

The Master asked if the jury would care to re-examine Mr. Basset?

The jury thought it unnecessary.

In a very brief summing up, the Master said that if the defendant was found of unsound mind there was no necessity for his being placed in the asylum. The Court would appoint a committee, and they might decide what measure of liberty he should exercise.

The jury, after a not very lengthy consultation, gave, as their unanimous verdict, That Mr. Basset is of unsound mind, and, as the opinion of sixteen, that he is also incapable of managing his own affairs.

TRANSLATIONS FROM FRENCH JOURNALS.

COMPLICATIONS IN GENERAL PARALYSIS.

M. A. FABRE DE PARREL, in his inaugural thesis, after affirming that general paralysis is, of all the neurosis, the least reducible to invariable description or definition, so multitudinous and fluctuating are the symptoms, has enumerated the following accessories or complications in support of his proposition. These are, it is to be understood, additions to the chronic diffuse interstitial encephalitis which constitutes the characteristic pathological condition of the disease.

1. Hemiplegia, or rather hemi-paresis.
2. Epileptiform Convulsions.
3. Monoplegia.
4. General Tremor.

(a) He adds that in the examination of these accessory and circumscribed lesions he has found in the persistent hemiplegia, atrophy of one hemisphere, central encephalitis, softening—cerebral hæmorrhage being very rare in consequence of the thickening of the walls of the vessels.

(b) In epileptiform convulsions there may be found active congestion of the membranes, accompanied with capillary hæmorrhage, upon the localities identified as motor centres.

He concludes that great experience and exactitude are required in forming a diagnosis between the phenomena presented in circumscribed lesions and those in actual general paralysis, and demands special attention to the defective articulation, the general weakening of the intelligence, the complete self-satisfaction. The incoherence and absurdity of the general paralytic is special and establishes a complete distinction from the preservation of a certain amount of judgment, a certain perception of his real position, and a special sensibility of the ordinary dement.—*Annales Medico Psychologiques*, November 1879.

CLAUSTROPHOBIA.

It is well known that for some time, in the opinion of Dr. Bourdin, there has existed a cerebral state characterised by a horror of void or empty spaces, which he designates Agoraphobia. For some years he has observed, it is to be confessed in a few instances only, a somewhat analogous but opposite condition, consisting of a dislike to closed spaces, or Claustrophobia. His studies may cast a new light upon the general subject of mental disease. 1. A typical case of this kind was presented in a young man of good position subsequent to an attack of gonorrhœa,

and which was erroneously designated by my colleague, Legrand du Saulle, as aberration of the sense of touch. The patient, without any intellectual lesion, was depressed by the suspicion that he suffered from the infection of impurity. From the fear of further vicious contact, he would not touch the handle of a door, nor would he shake hands when uncovered, nor, subsequently, touch any part of the human body. Further, he would not place his unslippered feet upon the carpet, was incessant in his ablutions, adducing as a reason that the mere contact of his fingers with external objects gave the impression of an adhesive substance which was removed by water, even two drops of which was effective; such imaginary cleansing proving the hallucination to be mental not tactile. Up to this point these were merely the peculiarities of a finical youth; but, subsequently, he became affected by the terror of solitude, so that he imperatively demanded that the door and windows of his apartment should be kept open. In society this dread was so dissipated or controlled that he allowed the doors &c. to be shut. This morbid fancy was so intense that he caused all the windows of the house, and the door opening upon the street, to be open during the night, from which he issued to wander about till daylight. His description of his sensations was, that he was urged by an internal impulse or agony, resembling what might occur if an individual rushed along a passage narrowing as he advanced, so that he could neither go forward nor recede. While thus oppressed he rushes to the country.

2. Madame X., hereditarily disposed to insanity, her father having been insane; enjoyed good health in youth. She married early and had three children, the eldest of whom was an imbecile, without intelligence or affection. The second, a girl, became epileptic when two years old, with loss of memory. The youngest apparently enjoyed good health. The patient, after labouring under typhoid fever, became weak in mind, suffered from constant cephalalgia and complete loss of memory. The deprivation related chiefly to very recent occurrences. Anæmia was followed by hysteria, anger, and fury. There followed extreme melancholia pervigilium, suicidal tendencies, and intense sensations of cold. Sent into the country for change of air, she experiences various morbid conditions; is annoyed by the sound of her own voice, and flies from those whom she loves. In ascending a height she is seized with an involuntary terror, strikes her head against a wall, and staggers down to the bottom, and when calm and respiration were resorted, has the sensation as if she had emerged from a well into the open air. A similar sensation was experienced when shut into a bathroom, the windows of which she broke to secure her liberation. Her fear is roused by the shutting of the door of

her own room, the key of which she endeavours to secure, and having done so, rushes forth and loses all perception of where she is. She would not have remained with a shut door for an empire. Subsequently she complained of the dread of open spaces and the inability to find her way, although such expressions were not used by her in a psychological sense.

3. The third case, cited by Dr. Meschede to the Society of Naturalists, at Cassel, represents a youth experiencing dyspnœa and vertigo whenever he enters a small room or narrow place. Compelled to abandon his studies, he became a farmer, but invariably slept in the open air; except during the depth of winter, when he occupied a vast apartment, having the doors and windows open. He was not hereditarily predisposed, but subject to nervous agitation.

4. M. Raggie, of Boulogne, relates that a painter, while excited by the praises of his associates, and about to finish the picture on which he was engaged, perceives that the door of the saloon is locked, becomes alarmed, rushes to the window, makes his escape therefrom, and by means of the roof of an adjoining house reaches the ground, and then becomes perfectly tranquil.

M. Ball refers to the work of Dr. Beard, of New York, on *Morbid Terrors*, in which it is proposed to designate such states as those described above under the name of *Topophobia*.—*Annales Medico-Psychologiques*, November 1879, p. 378.

[The cases described above do not appear to us to belong to the neurose named by Dr. Verga, of Milan, as *Claustrophobia*. They may be more fairly classed under what the Germans formerly called *airomania*, in which, either from some affection of the cardiac or pulmonary organ, or from mental delusion, there was an intolerance of confinement to narrow places, a craving for the open and fresh air, &c. We have encountered many examples of this symptom, for it is nothing more, both in the sane and insane, although generally combined with hallucinations of the muscular sense. The best known illustration is that of Saussure, who, conceiving that his proportions had waxed to so enormous a size that he could not inhabit small rooms, or pass through doors of the ordinary width, had the partitions between his rooms taken down, and so on. We had a patient who believing that he was a barley corn, or reduced to that magnitude, would not expose himself, and courted corners, in order to avoid the vigilance of the sparrows.—*Ed.*]

SUICIDE IN GERMANY.

Dr. Dresde, of Saxony, writes in the *Augsburg Gazette*, that the number of suicides in that country has considerably increased. The statistics for 1878, which are more trustworthy than those for the preceding years, show 1,126 suicides, of whom

215 are those of females. In 749 cases death was effected by hanging; in 217 by drowning; and in 88 by shooting. The causes indicated are—domestic or social events, 284; melancholia or disgust at position, 105; intemperance and its consequences, 94; aberration of intellect, 90; privations, 89; physical sufferings, 65; unfortunate amours, 39.

The age of the suicides varied between 14 and 90. It is suspected that, in the number quoted, 8 had not attained the age even of 14, while four had reached between 80 or 90.

It is asserted that the proportion of suicides in England during the last weeks of 1878 is triple that of the corresponding period in the preceding year—an increase attributed to the continuance of bad times, the inclement weather, inundations &c.—“*Le Progrès Médical*,” September 20, 1879, p. 754.

[The attention of the extreme advocates of abstinence in this country should be directed to the prevalence of intemperance in other countries, and at the same time to the declaration of Dr. Fraser, Professor of Materia Medica, Edinburgh University (*Scotsman* newspaper, February 27, 1880), that moderate quantities of alcohol contribute to the nourishment of the human body.—*Ed.*]

INSANITY AS A GROUND OF DIVORCE.

M. Van der Swalme comes to the following conclusion on this subject:—

The moral, religious, and practical considerations which appear to justify recognition of alienation as a ground of divorce appear insufficient. In dealing with such a matter it would be necessary to plead, not simply mental derangement, but chronic, incurable derangement, with loss of memory. Cases coming under such a category will be all the more rare that patients so affected generally die early. It would be rash to fix for the small number of survivors the special terms of divorce, however carefully considered, as these might greatly aggravate the condition of the sufferers. It hence follows that alienation does not seem to constitute a more clamant reason for divorce than many other infirmities and diseases which disturb conjugal happiness.—*Medical International Congress of Amsterdam*. “*Le Progrès Médical*,” October 4, 1879.

CLASSIFICATION OF MENTAL MALADIES.

M. Van der Lith, answering the questions whether a classification of mental diseases is necessary, and upon what basis it should be founded, writes: 1. Such a classification is necessary for instruction of students, the study and treatment of patients, as well as for medico-legal investigations. 2. The difficulties in all classification are greatly multiplied in the case of mental

diseases by the complicated and little-known structures affected, by the diversity of their functions which dominate our life and being, by the varied degrees in character and amount of development, and by the great number and difference in the morbid causes which become factors of insanity. 3. In order to secure a clear and simple classification it would be expedient to select a different principle in that intended for the instruction of students, from that intended for the classification of patients. 4. Such classification should have the same base as that of other diseases: (*a*) functional disturbances; (*b*) the causes which interfere with normal conditions; (*c*) and lastly, the anatomical lesions on which the symptoms depend. 5. It is expedient to divide mental maladies into groups, but to keep in mind that the characters of these may not be stationary.—*Medical International Congress of Amsterdam*. “*Le Progrès Médical*,” October 4, 1879.

HYSTERIC BLINDNESS.

Total blindness occurred in a girl, age 16, upon January 21, 1879. M. Abadie diagnosed the integrity of the membranes at the base of the eye, suspected hysteria, and discovered general cutaneous anæsthesia. Believing in the existence of an hysteric amblyopia, he, without informing the patient, affixed three pieces of gold upon the left temporal region, when, after the lapse of a quarter of an hour, vision was restored in the left eye, but no change took place in the right. There was no known cause of this affection.

January 23.—A magnet was applied to the left side of the head, followed, after ten minutes, by slight amelioration. When the magnet is applied to the right, vision returns in twenty minutes.

January 25.—Somnolency, almost lethargy, followed application of magnet.

Upon January 29 there is permanently applied a piece of gold to each temple, there having been given internally the muriate of gold and soda.

February 5.—Vision of different degrees of acuteness in both eyes. There were prescribed the cold water cure, muriate of gold internally, and the application of gold, as earrings, armlets, &c.

Silver, copper, and zinc were successively tried without result. After an attack of fever the patient was subjected to electrical currents through the orbits. A quarter of an hour after this application complete vision returned, and by the continuance of local electricity the restoration became permanent, although somnolency remained.

The author concludes from these observations that the application of metals produced at once temporary restoration of vision, with somnolency and lethargy; while local electricity effected complete cure.—*Medical Society of Hospitals*.—"Le Progrès Médical," November 1, 1879, p. 838.

TRANSMISSION OF HYDROPHOBIA FROM MAN TO A RABBIT.

M. Raynaud received a patient into his ward in the Hospital of Lariboisière labouring under all the symptoms of hydrophobia. Shortly before the death of the patient, M. Raynaud inoculated several rabbits with his blood, and several others with his saliva. The former experiment produced no effect; the latter was followed by indubitable signs of hydrophobia in a few days. He subsequently transferred the sub-maxillary glands of an infected to a healthy rabbit, when hydrophobia was again induced. No example has been recorded of the transmission of this disease from one human being to another; but M. Raynaud has demonstrated the possibility of such an accident, by transmission from man to the lower animals.—*Académie de Médecine*. "Le Progrès Médical," November 15, 1879, p. 904.

APHASIA IN GENERAL PARALYSIS.

M. Magnan has met with two cases of aphasia in general paralysis. 1. A cook, addicted to drinking, became affected with general paralysis, was seized with apoplexy, and subsequently became incoherently aphasic, pronouncing words and parts of words without signification. On death, there was found diffuse encephalitis of the membranes, especially on the left side and in the region connected with the function of language. 2. A man, subject for 18 months to general paralysis, complicated with apoplectiform attacks, was deprived of all language except the word *merci*. On dissection, grave lesions were found in the neighbourhood of the fissure of Sylvius which was obliterated.—*Société de Biologie*. "Le Progrès Médical," November 15, 1879, p. 903.

PARALYSIS AGITANS.

M. Magnan has signalised an unusual form of this affection, in which the tremor is excited only when the patient makes particular efforts demanding special exertion, and consists in nodding the head forwards coincidently with the rigidity of certain other groups of muscles.—*Société de Biologie*. "Le Progrès Médical," December 20, 1879.

BRAINS OF CRIMINALS.

It appears that M. Benedikt, of Vienna, and M. Hanot of Paris, have described a doubling of the second frontal convolution of the brain in assassins, thieves, and other jail birds. Sixteen examples are adduced, and the anomaly is said not to have been found in mere hospital patients.—*Société de Biologie*. "*Le Progrès Médical*," January 3, 1880.

PRECOCITY.

M. M. G. Dalaunay represents precocity as a mark of biological inferiority. The lower species become rapidly mature. In man the development is so slow that the brain continues to increase until fifty. The lower races of mankind become mature more speedily than the higher. In illustration, it may be mentioned that the infants of the Esquimaux, Negroes, Japanese, Arabs, and of the natives of Cochin-China, are, up to a certain age, more vigorous and intelligent than those of Europeans. In proportion as a race advances its members become less precocious. The normal stature of the French is attained less quickly than that of other nations; that of conscripts, for example, has been twice lowered since the beginning of the century. It is affirmed that the heads of French nobles formerly exceeded in size those of their fellow citizens, but they are now smaller than those of the learned and mercantile classes. Again, females are more precocious than males. Among domestic animals the female becomes more quickly matured than the male. In man, the girl from eight to twelve gains one pound more per annum than the boy. In mixed schools, the girl up to twelve years attains the first places. The author concludes that the age at which children enter the naval and military schools is too early, as the cleverest or most precocious prove ultimately failures. The inferior tissues are most early perfected. The brain, and especially the anterior and the superior part of the left hemisphere, supposed to be connected with the manifestations of intelligence, are of latest growth.—*Société de Biologie*. "*Le Progrès Médical*," January 3, 1880, p. 9.

FEMALE ALIENISTS.

There is quoted, from the *New York Herald*, the announcement that Madame Cleave, Dr. in Medicine, formerly assistant in the asylum at Davenport, and now a member of the administrative council of that institution, argued in a conference on public charities, held in Chicago, strongly in favour of the

appointment of female medical attendants on lunatics at least of their own sex. Certain of her propositions are worthy of attention. 1. She affirmed that, as many mental maladies depended remotely upon conditions of the utero-genital organs, educated females could alone examine, understand, and medicate these. 2. That female patients invariably endeavour to conceal from medical men such affections, but would willingly reveal them, or could not at least conceal them, from individuals of their own sex. 3. That, on the restoration of sanity, the recollection of the interference of physicians with such subjects is intolerable to feelings of delicacy and modesty.—*Annales Physiologiques*, January 1880, p. 173.

MORPHIAMANIA AND MORPHINISM.

A lady, the wife of a merchant, who had been long subject to exquisite pain, had recourse to various medical advisers, but at length to one who recommended morphia, hypodermically injected. Having acquired dexterity in operating upon herself, she made sometimes as many as twenty injections in a day. While thus treating herself she bore a healthy child, who survives. The drug having been experimentally withdrawn, the cephalalgia returned, with exhaustion and mental derangement. On resuming the use of morphia, and no limitation being imposed as to the quantity, her health was restored and the pain disappeared, and she was able to participate in all the pleasures and pursuits of general society. She succumbed under a second attack of mania. She used $1\frac{1}{2}$ grammes or 150 or 200 francs' worth of opium in a month.—*Ibid.*, p. 174.

HABITUAL DRUNKARDS IN PRUSSIA.

After enumerating the steps taken in France, England, and America, to meet and to counteract intemperance and its consequences, and stating that 25 per cent. of the insane admitted to public hospitals in Prussia were habitual drunkards, the director of an important asylum proposed and carried in the Medical Synod, reports the *Gazette of Magdebourg*, the following resolutions:—1. That persons found drunk in the streets, in public-houses, or places where intoxicants are sold, shall be liable to punishment. 2. That the vendors of drink, who supply those in a state of intoxication, shall likewise be punishable. 3. That habitual drunkards should be compulsorily placed in institutions specially prepared for their reception.—*Ibid.*, p. 172.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

American Journal of Insanity, January 1880. Edited by JOHN P. GRAY, M.D., Utica, N. Y. State Lunatic Asylum. John Wiley & Son, Astor Place, New York.

THIS Journal continues to maintain its very high reputation. The first article is an interesting one on the responsibility of Asylum Superintendents in America, in which some knotty legal points having reference to the laws of the United States are discussed. The second article relates to English laws on lunacy, which more immediately concerns us. Upon review of the whole evidence before the Dillwyn Committee, the writer concludes that the only possibility of unfair dealing lies between the party placing a person in confinement, and the medical superintendent of the institution, and he thinks absolute impossibility of fraud or collusion might be secured by the interposition of a magistrate's authority between the party sending the patient, and the authority to whose custody he is committed. He, however, candidly quotes the evidence of Mr. Percival before the Committee as follows. It is opposed to the American system and appears to us conclusive:—

“My own idea is that if you substitute any magistrate or official person as the party to sign the order, it will be most mischievous to the liberty of the subject, and very prejudicial to the alleged lunatic, for this reason; there is, I think, no greater safeguard for the due performance of a duty than individual, personal responsibility. Such responsibility, if it is not duly exercised, a jury will visit with damages, and in cases of false imprisonment juries give very heavy damages. At the present time the responsibility is such that very many decline to take it upon themselves for the benefit of the lunatic, even when his benefit loudly demands it. I think that this safeguard is very well supplemented by certificates and reports, and by visits by the commissioners and others. If you allow a magistrate either to sign the order or to countersign the order, you will at once destroy all the responsibility of the relative or other person. If a person is falsely imprisoned under a magistrate's order there can be no remedy. If a magistrate has acted *bonâ fide* he will be relieved from all responsibility; he cannot be visited with a verdict for damages, and there will be no remedy for the lunatic. Besides, the magistrate will become simply a minis-

terial officer in the matter, and will be guided, if not absolutely, to a very great extent, by the certificate, so that really it will come to this, that the only safeguard will be the certificates. The great safeguard now is the responsibility of the individual who signs the order."

The report of the case of sarcoma of the dura mater, by Dr. Edward N. Brush, is interesting from the fact of the patient retaining his intelligence until coma set in not long before death, although, in addition to the tumour, which weighed $1\frac{1}{2}$ pounds, there was an abscess the size of a pigeon's egg in the left posterior central convolutions.

The Journal of Nervous and Mental Disease.—Edited by Drs. JEWELL, BANNISTER, HAMMOND, CLYMER, and MITCHELL. January 1880. Chicago.

This number opens with an able article by Dr. Jewell, on Neurasthenia, under which term he includes all the various forms of defective nervous power, whether inherited or acquired. He premises his remarks by stating that the causes of disease in general are not only complicated but often subtle and unknown. With regard to cases of neurasthenia, he groups them according to their apparent mode of production, as follows:—

"1. *Hereditary or diathetic neurasthenia.* This is a class of cases often met with, and to which reference will be made hereafter at greater length. 2. *Dyspeptic neurasthenia.* 3. *Assimilative or trophic neurasthenia.* 4. *Genito-urinary neurasthenia.* 5. *Neurasthenia from over-work and from over-excitation.* 6. *Diseases in which neurasthenia forms a prominent factor.* Besides these clinical groups, others should be made, such as partial and general neurasthenias, mental and bodily neurasthenias, and various subordinate groups named according to the parts of the body or groups of organs affected."

With respect to the first class, he makes the following practical remarks:—"Persons are daily coming into life, to pass their days until death, from beginning to end, below the plane of an average nerve-nutrition. They seldom present us with localised, destructive disease, but from first to last lack an average volume of nerve power and endurance, whether mental or physical, and joined with this condition of things, there is undue sensibility. In these cases the energy of nutrition is low. Recuperative power is far below what is ordinarily met with. Such persons are frail and puny from the cradle to the grave. They are at all times easily exhausted. They are with

difficulty rested. They are usually thin in flesh, but they are not always so. They are often quite fleshy, and in a few cases may have a ruddy exterior. But they are neurasthenic all the same. If females, they are prone to hysteria, to headaches, irregularities in the action of the circulatory organs, especially to disordered cardiac action, to neuralgias, to be unduly excitable, and to be easily exhausted, or they may be easily kept awake, and thus lose sleep, from comparatively slight disturbances."

With reference to the dyspeptic form of the disease (digestive neurasthenia), he says there are two chief ways in which it becomes of practical importance:—

"First, by diminishing the quantity and deteriorating the quality of the supply of materials to the blood. In such cases there may be, as already said, no over-action or over-excitation, or lack of rest, or any hereditary tendency to neurasthenia, or excessive or unnatural discharge to waste the materials of the blood for the nutrition of the higher tissues, though any or even all these conditions may be present with the dyspepsia in any given case. Under such circumstances, the tissues become worn and feeble in action, and once in this unhappy condition, a repair of damage is almost impossible without a cure of the dyspepsia. . . . Secondly, dyspeptic disorders of the stomach may be related to neurasthenia, or certain of its phenomena, in an indirect or reflex way. The stomach, small intestine, liver, &c., have very important nervous relations, not only with the ganglionic system, but also with the spinal cord and medulla."

The third form of neurasthenia, the assimilative, is one which Dr. Jewell thinks has never been clearly recognised. He considers it to be owing to "a defect of the process of assimilation itself, a sort of paresis" of "the intimate process of nutrition, as it is accomplished between the tissues and the blood."

The fourth form is the genito-urinary neurasthenia, which comprises those cases of exhaustion from sexual excesses, with which every medical man is familiar.

Dr. Jewell reserves the forms spoken of under the fifth head for discussion on a future occasion.

Lastly, he makes the following remarks with reference to the forms of disease in which neurasthenia is a prominent element:—

"There are many cases of neurasthenia presenting a combination of all the forms already described. Such may be called complex. But it is rather to forms of nervous disease more or less distinct, in which neurasthenia is a factor, to which I would, at present, call your attention. First among such nervous

affections is *hysteria*. A careful analysis of the multiform phenomena of hysteria reveals *consistently*, two features—undue excitability, or mobility, and loss of nerve power. No case of typical hysteria can be found, in which these two elements are not present. But to particularise: the morbid increase of the sensibility of the nervous system is especially observable in respect to simple reflex and emotional excitability. . . . Reflex responses of the nervous system, whether from a peripheral or a cerebral source, occur in hysteria more easily than in health. As respects the emotions in hysteria, they are altogether more easily excitable than in health, and the cerebral reflexes or impulsive actions to which emotional excitations tend to give rise, occur more easily than in the normal state. . . . In the next place I would direct your attention to melancholia, which, so far as its symptoms go, embraces morbidly distressing and at times exciting emotion, and side by side with this, loss of will power and of thought power. Such cases may, of course, include, as they often do, localised disease in the nervous system, more especially the brain, but, in the majority of instances, such is not the fact. There is brain exhaustion, and it may be morbid excitation from some source. There may be hereditary weakness of nervous organisation, deficient nutritive supply, insufficient sleep, and too much work and worry. In all these ways, singly or combined, that state of brain exhaustion may occur, coupled with an unhealthy cerebral circulation, which together are the essential conditions of most melancholias. In such cases the cure is usually effected, sooner or later, by much sleep, the best nourishment possible, and the removal as far as possible of causes of nervous exhaustion.”

The whole of Dr. Jewell's article will well repay attention.

Seventh Annual Report of the Northern Hospital for the Insane of the State of Wisconsin. Madison, Wisconsin: David Atwood, State Printer. 1879.

The psychological observations of Dr. Walter Kempster, the Medical Superintendent, deserve especial attention, as they form a striking contrast to the ordinary routine of asylum reports. The following remarks on the return of persons to asylums with second attacks of insanity are well worthy of consideration:—

“This disease does not differ from others in liability to recurrence—especially where predisposition or environment foster the germs of disorder. For instance, certain people are liable to repeated attacks of lung disorder, others to bowel or

kidney trouble, others to rheumatism and its allied complaints, each attack recurring after some breach in hygienic conditions by which the general tone is impaired and health interfered with. This is a matter of common observation, and is recognised by all; it simply indicates that lungs or stomach or kidneys, or the muscular or arterial system, are the weak points in family or individual organisation, giving way when more than ordinary strain is put upon them, and so the individual may have one, two, three—a dozen attacks of either form of disease and recover, providing no serious lesion results in the organ specially affected. Brain disease follows precisely the same general laws as do other forms, recurring when the conditions recur which gave origin to the first attack, and subsiding when health is restored, providing, as before, that no serious organic change has taken place within the brain which precludes it from properly performing its functions. In the one instance a chronic change in liver, heart, stomach, and so on, precludes the affected organ from acting properly; so in the other a chronic change in brain tissue prevents that organ from properly performing its function—the ultimate condition in each case being that in repeated attacks the affected organ succumbs. In the one instance the nature of the complaint does not often prevent the family or friends from properly caring for the sufferer; in the other, the manifestation of disease is of such a character as to preclude, in many instances, proper care at home, and society is called upon to care for them; it may be in one or a half-dozen attacks.

“There is one important item, however, to be taken into consideration. I believe that in many cases second attacks of insanity occur because the individual is removed from treatment and required to pick up the tangled ends dropped from the mental grasp on the approach of disease and again attempt to weave them into the daily fabric of his life, before the brain has had time to recover from its first shock of disease, and is in a proper state to perform labour. In this respect, it differs from the other organs, which have a specific amount of work to do. But the brain is often in the hands of a hard task-master, who lashes it onward to its own overthrow, when it should be nursed and protected from violence without or within. It is therefore important that everyone should know that, in a great measure, he carries in his own hands that which shall contribute to his weal or woe according as he uses or abuses it.”

He speaks encouragingly as to the cure of chronic cases of insanity, and states that nineteen of the cases discharged as recovered from his hospital had been insane upwards of one year.

His remarks on the causes of insanity are those of a man who has thought earnestly on the subject:—

“ In attempting to arrive at a satisfactory conclusion as to the causation of insanity, we are at the outset met by a complex question not easily solved. To explain this, let each endeavour for a time to resolve into component parts the ideas which lead one presumably sane to do certain acts or perform certain offices, or in other words, to analyse one's own mental operations, giving the steps, one by one, by which conclusions are reached, and the reasons for such conclusions. The task will be no easy one, and there are but few who undertake the experiment. Now if this matter of analysis is so difficult for an individual to do for himself, how much more difficult is it for one to analyse the conditions existing in the mind of another, especially when the operation of that mind is affected by disease. To resolve the tangled web of causation and determine what item is harmful and what item harmless to mental health is a task that only infinitude can comprehend. It is impossible under the most favourable states to separate into elementary parts all the minute circumstances leading up to a final change from a sane to an insane state ; it is, indeed, often difficult to draw the line between these two conditions, and to say where one ends and the other begins, so subtle are the beginnings. It is not often that one grand catastrophe overtops mental health ; it is the constant recurrence of unfavourable acts or thoughts, the steady disregard of healthful conditions, the accumulation of adverse surroundings which, from selection or misfortune, heap themselves upon the individual ; the oft-repeated disregard of the common laws of hygiene, ignoring temperance in all things, deviating from established principles either in thought or morals ; in fact, any or all things which tend to lower vitality and produce disease, operate as a cause. Now, it is impossible to separate out from all the rest one factor which would be more likely to produce disease than its congeners, and if we could do so it would not affect the result. Each individual organism has its own peculiarities, its own weaknesses, and what might seriously retard healthy growth in the brain tissue of one person might not so seriously affect the same tissue in another.”

On the question of hereditary transmission, Dr. Kempster refers to the interdependence of diseased states, and gives instances of the mutual convertibility of different forms of hereditary disease which substantiate Dr. Winn's theory of the correlation of force in hereditary disease. Dr. Kempster was apparently not aware that in 1869 Dr. Winn published a treatise on the “ Nature and Treatment of Hereditary Disease.”* He also wrote an article in the *Journal of Psychological Medicine* for October 1875, vol. i. (new series), part II., in which he gave additional arguments in support of his theory.

* Published by David Bogue, 3 St. Martin's Place, London.

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NEW SERIES.

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THE JOURNAL

OF

PSYCHOLOGICAL MEDICINE

AND

MENTAL PATHOLOGY.

ART. I.—THE STUDY OF MEDICAL PSYCHOLOGY—CIRCLES OF MENTAL DISORDERS—MODERN NERVOUS DISEASES—EDUCATION IN RELATION TO MENTAL DISEASES.*

By J. CRICHTON BROWNE, M.D., Edin., LL.D., F.R.S.E., Lord Chancellor's Visitor of Lunatics.

THE General Council of Medical Education and Registration, at its recent session, declined to recommend the licensing bodies of this kingdom to make mental diseases a subject of separate examination for all degrees and licences to practise medicine; and those who know most of the state of medical education on the one hand, and of Psychological Medicine on the other, will, I think, approve the decision at which the Council arrived. The curriculum which a student of medicine has to pursue is already so laborious and varied, that cogent reasons ought to be adduced for adding in any way to its intricacy and burdens; while the teachings of psychological medicine are still so ambiguous and unsystematic, that they can scarcely pretend to supply either much useful instruction or a valuable discipline to the mind. A speciality in medicine—and psychological medicine is a natural and inevitable speciality—is a late differentiation of professional knowledge, and implies skill and attainments that should be sought for only after a liberal general training is complete. To incorporate special study with general medical education is, therefore, to do injustice to both; for general medical education, which already fully occupies the time set apart for it, must be detrimentally curtailed or compressed to make room for the special study; and the special study cannot be advantageously carried on while the foundations

* An address delivered at the opening of the section of Psychology, at the forty-eighth Annual Meeting of the British Medical Association, at Cambridge.

on which it ought to rest have not been wholly laid down nor thoroughly consolidated. Facilities for the special study of medical psychology, and perhaps also some test of proficiency in it, ought to be provided for those who propose to devote themselves to lunacy practice; but no one should be encouraged to avail himself of these facilities, nor submit to this test, until he has finished his general medical studies and surmounted his examinations. For those, however, who look to general practice, such an acquaintance with insanity as may be obtained in connection with the study of physiology, medicine, and medical jurisprudence, should be considered sufficient, until the exigencies of professional life bring with them their special and inimitable training in this as in so many other subjects.

But, while we deprecate the introduction of the subject of mental diseases into medical education and examinations, we may, without inconsistency, applaud its recognition by this Association, and the dedication of a Section to its consideration at these annual meetings; for this Association, representing as it does the breadth and culture of the profession, its theoretical scope and practical aims, could not, without grievous default, ignore a department of medical science that is in intimate relation with philosophy, and a branch of practice that deals with a large class of diseases, and in which a numerous body of able and painstaking men are engaged. To overlook medical psychology at these meetings, and to relegate the consideration of it to societies composed entirely of those who march under its banner, would, it seems to me, be to inflict some deprivation on medical psychologists and the Association generally. It would be to deprive the former of the benefit they draw from contrasting their special experiences; while at the same time they come in contact with professional brethren of views and habits of thought different from their own, and obtain a commanding survey of the whole field of medicine, with its broad central expanses and fringe of minor allotments. And it would deprive the latter of the advantage it derives from bringing before its members in a convenient way whatever advances are being made in the knowledge and treatment of a group of diseases that have an ever-growing interest for all who practise medicine.

Medical psychology is, as I have said, an inevitable speciality; but it is a speciality that is broadly based on general medicine, and that tends not, as some specialities unhappily do, to become pedunculated into a quackery, but to increase the breadth and depth of its attachments to the parent stock. It becomes daily more and more apparent that a bodily derangement is responsible for every mental disorder, and that a mental element mingles with every bodily disease. Upon the medical psychologist, therefore, it is incumbent to keep abreast of general

pathology, while upon the general practitioner it is incumbent to know something of the progress of psychological medicine. And how important to the public it is that the duty of each of them in these respects should be diligently performed, becomes apparent when we contemplate the number of victims of mental disease that we have with us now, and of diseases which, although they may not be designated mental, nor fall immediately within the province of medical psychology, are still in close alliance with insanity.

According to the latest official returns, there were, on January 1 last, 71,191 lunatics, idiots, and persons of unsound mind in England and Wales, 9,624 in Scotland, and 12,819 in Ireland—making a grand total of 93,634 persons labouring under mental diseases or defects in Great Britain and Ireland. But this grand total, we must recollect, represents only certified or officially recognised lunatics and idiots, and corresponds with an inner circle of insanity, marked off by an arbitrary and somewhat shifting line, and outside of which lies a second circle, embracing a multitude of persons who are subject to no legal restraint, but still come to a large extent under medical supervision, and cannot be shut out from any scientific survey of insanity. Within this second circle—the crazy circle, I should be inclined to call it—fall lunatics whose mental disease, although patent enough, is of so inoffensive a kind that it is not thought justifiable to interfere with their liberty; lunatics whose mental disease is concealed; and lunatics whose mental disease is of a partial character, and is not, perhaps, popularly regarded as mental disease at all. Here we have instances of incipient insanity that has not yet expanded into dimensions that are perceptible to the eye of the law, and of chronic insanity that has crept out of its range of vision; and hosts of eccentric, half-mad, crack-brained, and imbecile persons, who move about in every grade of society. No census of the population of this second or crazy circle has ever been attempted; but that it is very great, may be inferred from a number of circumstances. The late Premier told us that he had to keep a capacious bag for the crazy correspondence from presumably sensible people that was constantly pouring in upon him; and the Astronomer-Royal, we are informed, has a row of pigeon-holes, in which are stowed away the mad communications as to perpetual motion, the squaring of the circle, and other obscure problems, that reach him daily from unappreciated lunatics. Our courts of justice are but too often engaged in investigating crimes committed by indisputable lunatics, whose insanity was not noticed until it culminated in violence or fraud; and our coroners can tell a dismal tale of the consequences of mental

disease that has never secured official recognition. There are now upwards of 1,700 suicides in England and Wales annually, and of these not more than thirty occur amongst registered lunatics of all classes; but in at least three-fourths of these 1,700 suicides, as appears from evidence given at the inquests, there were distinct signs of mental unsoundness preceding, often for considerable periods, the act of self-destruction; and, as suicide is but the crowning expression of melancholia of a certain intensity, and is only resorted to by a small percentage of those who suffer from mental despondency, the fact that not fewer than 1,300 suicides of unregistered insane persons take place in England and Wales yearly, reveals great unfathomed depths of mental unhealthiness in our community. And the experience of medical men also points to vast reserves of hidden and unauthenticated insanity. Of the patients whom they are called on to certify insane, a large proportion have been more or less mentally deranged for months, or even years, before the date at which legal or medical intervention is deemed requisite; and of the patients who seek their advice for mere bodily ailments, a certain number prove to be unmistakably mad, even when they are figuring as useful members of society, and are unsuspected, save by their nearest relatives, of any mental taint.

With the view of obtaining an approximate estimate of the contents of the crazy circle, I some time ago asked a few of my friends, both lay and medical, to scrutinise for me their own acquaintance, and to jot down, firstly, the number of acknowledged lunatics within that acquaintance, whether in asylums, boarded in private houses, or at home; and, secondly, the number of individuals included in it who, although not certified or acknowledged lunatics, are still held in general estimation to be *non compos mentis*—eccentric or half-mad. Well, the result of that inquiry was that, within its range, the half-mad were to the mad as two to one; from which we should have to conclude that there are at the present time upwards of 180,000 occupants of our crazy circle in the United Kingdom. Now, I am not inclined to adopt or defend that computation, nor to attach undue importance to an inquiry so trivial in character, and so beset with sources of fallacy. I only refer to it as affording some corroboration of the belief that there is much unrecognised insanity in the country, and that the crazy circle is densely populated.

But if we had summed up all the constituents of the crazy circle surrounding the circle of recognised insanity, we should still not have exhausted the material with which medical psychology is concerned; for, beyond the crazy circle, there lies another and an outer circle, which may be named neurotic, and in

which are assembled the sufferers from all forms of nervous disease that are not necessarily accompanied by mental disorder, but that must be placed in the same category with insanity, and that in many instances tend towards it. These are epilepsy and paralysis, locomotor ataxia, and every sort of spinal mischief, neuralgia, hysteria, chorea, and, indeed, the whole order of nervous diseases, which it need scarcely be said, are widely prevalent amongst our population. The returns of the Registrar-General, which are unavoidably most imperfect on this point, show that nearly 70,000 deaths are attributed to nervous diseases in England and Wales each year; and as these diseases are not all acute in their course, and are sometimes much protracted, this rate of mortality betokens that the number of persons afflicted by them and living at one time must be very considerable.

In the three concentric circles that I have enumerated, the insane, the crazy, and the neurotic, interchange and circulation is of course perpetually going on. They are incessantly agitated by centripetal, and centrifugal, and rotatory currents. A person who has been simply neurotic becomes suddenly insane, and rushes into the central circle. A certified lunatic recovers partially, and, being emancipated from restraint, steps into the crazy circle. And a crazy being, with occasional acute exacerbations of his craziness requiring temporary asylum treatment, oscillates between the crazy and insane circles. And, as I have already hinted, these circles are not sharply demarcated from each other. On the contrary, the whole mass of mental and nerve disease is finely gradated from the centre to the circumference, and the lines inclosing the circles into which it is for convenience divided, are drawn in an arbitrary manner, and are not by any means fixed and immovable. Hence the difficulties that arise in determining whether the contents of any of the circles are increasing or diminishing, for the shifting of the containing line in the slightest degree would obviously altogether vitiate any comparison of the quantity of the contents of any two circles at two periods, one before and the other after the shifting. With reference to the insane circle, it is alleged that its radius, which is really the definition of insanity, is of an elastic nature, and has been stretched in modern times so that this circle now comprehends much that formerly belonged to the circle of craziness. And thus an explanation, that will not seriously alarm us, is offered of the startling fact that the number of our registered lunatics and idiots has nearly doubled itself in the last twenty-one years, having increased from 37,762 in 1859, to 71,191 on the 1st of January last. Under the influence of the lunacy laws, we are told, and of a more liberal popular con-

ception of insanity, a considerable belt of what was formerly the crazy circle has been annexed to the insane one; and this annexation, together with the enlargement of all the circles in proportion to the increase of the population, will account for its strangely increased dimensions, and for the enormous increment of lunatics and idiots with which we have now to deal. For my part, I am not able to credit this flattering tale, nor to perceive any proof that the definition of insanity has been extended in the manner alleged; but I cannot pause here to examine this vexed and entangled question by the old methods. I desire rather to call your attention to the dimensions of the outer, or neurotic, rather than to those of the inner, or insane circle; and in doing so I may, perhaps, throw some light on the dispute as to the real or fictitious character of the enlargement of the latter. For, probably, a certain proportion is maintained between these two circles. Many nervous diseases lead up to and eventuate in mental derangement, and the *neuroses* of one generation are not rarely the *insaniæ* of the next. We should expect, therefore, that any marked increase or diminution in neurotic affections would be followed, after a time, by a corresponding rise or fall in the rate of prevalence of affections of the mind.

Well, the fact seems to be that neurotic affections are increasing and multiplying on every hand. Dr. Beard, an American physician, who has studied the subject with much ability, maintains that an entirely new state of the system, a morbid nervousness, unknown to the ancients or to the fathers of medicine, has developed itself amongst his countrymen during the last half century. This state declares itself in neuralgia, sick-headache, dyspepsia, hay-fever, and above all in neurasthenia or nervous exhaustion; and Dr. Beard appears to think that this it is that has set its stamp upon bodily configuration—making the Americans taller, thinner, and lankier than their original stock in England and Germany. The indications which he adduces of the unprecedented nervousness of the inhabitants of the United States, when that nervousness has not mounted into actual disease, are their increased sensitiveness to cold and heat, rendering them unable to live with comfort in rooms of a temperature lower than 70° Fahr., their greatly augmented susceptibility to the action of stimulants and narcotics, the customary doses of which have had to be universally reduced in modern times; the premature decay of their teeth, and their inability to digest pork, which their grandfathers partook of in large quantities with impunity. From his own observations, and from the information which he has obtained from old and experienced physicians, and from medical literature, Dr. Beard unhesitatingly concludes that all nervous diseases are on the

increase in America, that many bodily diseases are assuming a nervous or asthenic type, and that nervous exhaustion is so common that it must be regarded as a distinct disease, of which there are several varieties.

In this country nervousness has not certainly obtained the ascendancy that it is represented by American physicians to have secured, at least in certain districts—notably in the Northern and Eastern States—on the other side of the Atlantic. And yet we are not without evidences that nervousness, that is to say, the nervous temperament and diathesis, are much more common in these islands than they used to be, and that in some respects we are approaching the state of matters that exists in America. It has even been maintained that in bodily habit our people are visibly adopting the style of Brother Jonathan, and that fat people are less numerous, and thin people more numerous, in the well-fed classes of society than was formerly the case. Allowing, it is said, for the effect of changes in diet, and for the deceptions which changes of costume, like that from crinoline to tying-back and Jerseys, may create, it is still manifest that our nation is growing thinner as a whole, and that plumpness is giving place to elegant attenuation. I daresay many of us recollect Hawthorne's description of a middle-aged English woman as she appeared to him in 1863. "She had an awful ponderosity of frame," it ran, "not pulpy, like the looser development of our few fat women, but massive, with solid beef and streaky tallow, so that (though struggling manfully against the idea) you inevitably think of her as made of steaks and sirloins. When she walks, her advance is elephantine; when she sits down, it is on a great round space of her Maker's footstool, where she looks as if nothing could ever move her." That was a coarse and ungracious caricature to come from a pen usually so dainty and kindly as that of Hawthorne, but it would, I think, give comparatively little offence if published now, compared with the storm of indignation that greeted it at the date of its appearance, and simply for the reason that there would be less truth in it. Very stout women, even middle-aged, are, I fancy, less frequently met with than they formerly were; while our young women, although, happily, far from rivalling the slimness of American girls, are, on the average, probably thinner than their grandmothers were at the same age. If this is so, we can only attribute the change which has taken place to the influence of the conditions of modern life upon the nervous system, and through the nervous system upon the nutrition of the tissues. The female sex is of nervous temperament as compared with the male sex, and Laycock used to say that feminine and nervous were synonymous terms. It is, therefore, in women that we should expect to find the earliest

and most marked manifestations of changes in the nervous system, influencing nutrition, like those just alluded to, and also of changes establishing greater susceptibility in sensory perception, which has also been pointed to as a sign of the growing nervousness of the age. Our refined and nicely discriminating nerves, it has been asserted, cannot, without discomfort, endure the strong impressions that give to coarse nervous organisations only an agreeable stimulus; and hence the substitution in modern decorative art of delicate combinations and neutral tints, for the glare of primary hues, of orange and red and purple, which were in vogue in days less nervous than ours.

All this, however, is somewhat problematical, and we are not without more definite proofs that nervousness is increasing amongst us. What might perhaps be regarded as the best of all proofs of that proposition—an increase in the rate of mortality from nervous diseases, the results of nervousness—cannot be adduced in its support, for the returns show that nervous diseases, as a whole, were as fatal twenty years ago as they are now, and that the number of deaths ascribed to them has fluctuated very little from year to year. But it is to be borne in mind that the death-rate from nervous diseases, as officially set forth, is but a fallacious guide to any estimate of their prevalence, for a large number of the victims of nervous disease succumb to inter-current maladies, which are registered as the causes of death; and nervous diseases might be disseminating themselves widely amongst us, while nothing in the death-rate gave token of the process. Then, analysis of the return of deaths due to diseases of the nervous system reveals that, while that return, as a whole, has undergone little change, remarkable changes have taken place in the items of which it is made up. A great reduction has taken place in the number of deaths ascribed to “convulsions”—a term which used to cover a multitude of infantile ailments, many of them not nervous at all, and which is still too indiscriminately applied; while a compensatory augmentation has taken place in the number of deaths ascribed to other and less obscure diseases of the nervous system, about which there could be no mistake. As, then, owing to increased care and skill in diagnosis, a large number of deaths, which were formerly improperly classified under diseases of the nervous system, are now classified under other headings, and as, notwithstanding this, the death-rate from diseases of the nervous system remains the same, we are entitled to conclude that there has been an increase in the death-rate from nervous diseases, although this is not apparent on the face of the return.

It is not, however, in connection with the death-rate due to

diseases of the nervous system themselves, that the increasing nervousness of this country is most clearly evinced. That comes out most distinctly in connection with the prevalence of other diseases not called nervous, but containing a powerful nervous ingredient. In diabetes the nervous system plays an important part, and the highest authorities are agreed that it is often brought on by mental anxiety and distress, or by sudden fear and shock. Well, diabetes is advancing with rapid strides in this country. In the year 1863 it caused 27 deaths in every hundred thousand persons living; in the year 1878 it caused 43 deaths in every hundred thousand living, having advanced steadily year by year in the interim. Dr. Pavy, who speaks from an unique experience, and with unsurpassed insight, is satisfied that these figures cannot be explained away by supposing that there is a more painstaking search for, and a readier recognition of, the disease now-a-days than of yore. He believes that the disease is decidedly more common than it was, and he attributes its greater prevalence to the increased wear and tear of these times. Kidney diseases, including under these nephritis and Bright's disease, have also advanced rapidly in recent years, having caused 338 deaths in every hundred thousand persons living in 1878, against 215 in the same number living in 1863; and in kidney diseases, we are now taught to believe, conditions of the nervous system are often involved. Dr. Clifford Allbutt has shown that mental worry is the chief cause of granular kidney; and Dr. George Johnson, while not agreeing with Dr. Allbutt on this point, holds that there is a real etiological relation between mental anxiety and some cases of albuminuria, and that mental emotion often aggravates chronic renal diseases. Heart diseases are year by year advancing all along the line, and particularly in their neurotic wing. They caused 909 deaths in every hundred thousand persons living in 1863, and 1373 deaths in every hundred thousand living in 1878; and the movement must be traced, in part at least, as Dr. Quain and Dr. Fothergill have pointed out, to the operation of the conditions of modern life, through the nervous system, upon the organs of circulation. The deaths due to aneurism, which, in my experience, is as much connected with mental as with physical strain, have increased in proportion to the deaths from heart disease. Rheumatism, in which there is unquestionably a nervous element, and gout, the neurotic character of which has been ingeniously vindicated by Dr. Duckworth, are both much more fatal than they were twenty years ago.

But without any increase in the death-rate from diseases in which there is a nervous element, or from nervous diseases themselves, it is still possible that the latter might be multi-

plying amongst us in a disastrous manner. For there are diseases of this class which do not shorten life. They cause chronic invalidism; they cripple power, and mar usefulness; they spread wretchedness around; they embitter existence, but they do not curtail it. Indeed, it might be argued that a few mild types of nervous disease are favourable to longevity, by imposing on those whom they afflict a strict regard to health, by withdrawing them from participation in pursuits that are beset with risks, and by creating a state of system that is indisposed to acute inflammatory attacks. Many observant medical men are of opinion that cases of the minor nervous affections, about which no statistics are available, of hysteria and fidgets, herpes zoster and urticaria, writers' cramp, and sick headache, are now studded over practice with a profusion that was formerly unknown. Premature baldness is far more frequent than it used to be. Early decay of the teeth occurs in the rising generation with painful frequency. Annual holidays have become a necessity, instead of a luxury. A new literature of neurology has sprung up of late years. New hospitals dedicated to the treatment of nervous diseases have been established; a new set of specialist physicians have adopted that line of practice. The consumption of neurotic remedies, of morphia, hyoscyamus, conium, chloral, the bromides, arsenic, strychnia, and gelseminum, is enormously on the increase, as is also the consumption of neurotic beverages like tea and coffee, and that great nerve sedative, tobacco.

These facts and considerations, and many more of like import, which might be placed before you did time permit, seem to warrant the inferences that nervousness and nervous diseases are increasing in this country, that the neurotic circle is enlarging out of proportion to the increase of the population, and that the crazy and insane circles, which draw from it the bulk of their constituents, are also probably enlarging in a manner disproportionate to the increase of population.

To inquire fully into the causes of this increase of nervousness and nervous disease would be to enter on an investigation of great interest but of vast extent. They may all, however, be summed up under, first, the increasing complexity of the nervous system, and, secondly, the increasing complexity of life. Neural development is still going on in the brain. It is not improbable that that organ is increasing in size in our race, and, of course, an addition to its weight that would be imperceptible in the scales might be of profound import in relation to its functional activity. But without increasing its size, the brain may elaborate its structure by putting forth new gyri, deepening its grey matter, developing new cells, and laying down new commissural fibres, to an incalculable degree; and this much is certain,

that whatever their nature be, organic processes are going on in the brain, by which new impressions and new modes of action are registered and transmitted from one generation to another. Thus it is that we, who are of the latest birth of time, inherit something from all past ages—a legacy which is paid not only in wealth of printed books, in cultivated continents, in multitudinous cities, in opulence of arts, in obedient armies of machines and scientific instruments, but in the finer architecture of our brains, in the enrichment of our nervous systems, in new phases of intelligence, and even in new proclivities to disease. For it would seem that subtlety of the higher nerve-centres brings with it instability, and that as brain-substance grows finer in texture it becomes more explosive in nature.

“Intelligence,” says Herbert Spencer, “is the adjustment of the inner to the outer relations.” If, then, the outer relations became more numerous, complex, and heterogeneous, the process of adjustment must become proportionately more difficult and hazardous. And outer relations have surely grown numerous, complex, and heterogeneous in modern times. Our environment has grown varied and intricate; and our environment it is that contains these conditions of modern life, which, acting upon complex and subtle nerve-centres, cause our increased nervousness and increased liability to nervous disease. On every class and on all ages, the pressure of modern life puts a severer tension. Competition waxes keener; the struggle for existence grows more exciting; and that this struggle involves danger is certain, for statisticians tell us that annuitants, clergymen, and the well-to-do classes who have to take no thought for the morrow, live longer than shopkeepers, artisans and labourers, who have to contend for daily bread. In this struggle, men find it to their advantage to crowd into towns, and Mr. Bright looks forward to a gradual diminution of the rural, and an increase of the urban, population. Well, it is in towns that nervousness and nervous diseases most abound, their growth being encouraged apparently by the excitement of town life, by the absence of the refining and tranquillising influences of nature, and by the relaxation of those social restraints which conduce to rectitude of conduct in villages and small communities.”

Of the many conditions of modern life which may be influential in promoting nervousness, and therefore in contributing to the increase of nervous and mental diseases, there is just one to which I would wish to direct your attention in the time that remains to me, and that is education. Now, it is perhaps somewhat disquieting to be told that education may be a source of disease. We have been accustomed to regard it as the panacea

against all diseases, and we have just adopted a national system of education, and greatly improved our standard of culture and machinery of instruction, in the hope that we shall thereby abolish or mitigate most of the evils by which the body politic is afflicted. Against the beneficial effects of education no physiologist or medical psychologist can have a word to say. They know well—none better—that it may be a safeguard of bodily vigour and mental integrity. Undisciplined grey matter is apt to be unstable grey matter, and the want of proper exercise, when nourishment is abundantly supplied, favours a rank and spongy development of feebly acting tissue. The brain steeped in idleness may degenerate as well as the brain that is worn and frayed with excessive toil; while ignorance is for ever betraying the ignorant into a violation of those laws the observance of which is indispensable to the well-being of the brain. But, on the other hand, the physiologist and the psychologist know also that education, while it secures many and great advantages, brings with it certain dangers that are peculiarly its own. They know that, under certain circumstances and in certain directions, it may be a menace to health, and sow broadcast the seeds of disease. To them education is the guidance of growth, and it may be good or bad according as it is calculated to result in constitutional vigour and a harmonious and well-balanced development of parts, or in constitutional debility, and a disproportionate and irregular development of parts.

The general tendency of education is unquestionably to increase the activity and susceptibility of the nervous system. It aims at establishing in the supreme nerve-centres certain approved channels of least resistance and areas of ready diffusion, and in doing this it has to modify the nutrition of these centres and stimulate their growth. It involves increased use of the brain, during which, of course, a larger supply of blood is received, and the vessels become enlarged. In the robust and enduring, this process, if wisely conducted, goes on without detriment to health, and in certain temperaments even with advantage to it. But in the fragile and sickly, in those who are badly nourished or scrofulous, who are unprepared by inheritance for brain-labour, or who are precocious and excitable, it may work serious mischief, particularly if it be pushed on with injudicious haste or ill-considered zeal. Then it is that it not only quickens the action of the nervous system, thus causing nervousness, but induces exhaustion of the brain, and even structural changes in it.

Dr. Treichler, of Bad-Lenk-Bern, in a paper read last year to the Society of Natural Historians and Physicians of Germany, called attention to the great increase of habitual headaches

which has, he alleges, taken place amongst boys and girls, and attributed this to the exhausting effects of excessive and ill-directed brain-work in schools. The publication of an extract of Dr. Treichler's paper in the *Times* has led to a very full discussion of the subject of which it treats by medical men and educationalists among ourselves, and the result of that discussion seems to me to be this, that Dr. Treichler has exposed serious dangers which lurk in our present teaching processes. His estimate that one-third of the pupils attending schools in France and Germany suffer from headaches, which destroy much of the happiness of life, and blunt the acuteness of the faculties, is probably an exaggeration. With us, at any rate, no such proportion of children attending schools of any class are subject to headaches brought on by over-exertion of the mind or any other cause. But still an appreciable and perhaps increasing number of school-children in this country suffer from recurrent headaches which are dependent on the toils and anxieties of school-life, and a great many are injuriously affected by these toils and anxieties in a variety of other ways. Mr. Brudenell Carter long ago pointed out that stupidity may be artificially induced by unintelligent and injudicious teaching in schools; and many physicians have recorded cases in which sleeplessness, night-terrors, somnambulism, epilepsy, hydrocephalus, hallucinations, and other maladies, have followed upon educational pressure unwisely applied to weakly children.

It is, of course, difficult to measure, even roughly, the evil consequences of educational pressure and brain-fatigue. Headaches may be unaccompanied by any very ostensible symptoms, and may scarcely interfere with school attendance. The manufacture of stupidity may be carried on on a large scale, and obtain no recognition in inspectors' reports, and tissue-degenerations and mental diseases may be separated by long intervals of time from the premature or inordinate stimulation of the brain, in which their roots really lie. It is only in exceptional instances that that stimulation brings on at once disabling or fatal disease. Some indication, however, of its effects in that exceptional direction may be discovered, I think, in the curious fact that of late years, in which it will not be denied that the schoolmaster has been abroad, the increase in the number of deaths from hydrocephalus has been not amongst infants under five years of age, but among children and young persons from five to twenty-five, that is to say, in the education and post-education periods. Then, evidence of the more remote evil consequences of intemperance in education may be seen in the preponderance of nervous diseases in the refined and cultivated classes, and in the parallelism which has been observed all over

Europe between the progress of education and the increase of suicides.

If, then, education may have such pernicious consequences as those just enumerated—and many more might have been added to the list—it is clear that it must be carefully guarded and regulated; but guarding and regulation such as required can come only from the physiologist and psychologist. The schoolmaster must therefore take counsel with them, and they, on their part, must enter more deeply than heretofore into the embryology and evolution of brain and mind, so that they may be able to supply precise rules for the guidance of growth. No doubt much valuable information on this subject has been already accumulated, justifying the promulgation of rules for the preservation of health during education, and for the avoidance of its detrimental effects, which are still but too little regarded. Our knowledge of the growth of the body has enabled us to arrive at some safe conclusions as to the growth of the mind. But an altogether new vista is opened up to us in reference to education by recent discoveries as to the localisation of function in the brain; and no more important problem in connexion with education and neurology now awaits solution than that relating to the natural order of development of the various centres of which the brain is made up.

The brain of a foetus differs from that of an adult not only in size, consistence, and external configuration, being comparatively deficient in secondary gyri, but also in internal structure. Its cineritious substance is composed of an unvaried nucleated network, the nuclei being rounded, and none of those cells with intercommunicating processes being visible, which at a later period are characteristic of the grey matter of the convolutions. As development advances, the brain increases in bulk and density, the gyri become more complicated in their arrangement, and layers may be distinguished in the grey matter containing nerve-elements of varied appearance, in which, moreover, cells of different shapes with numerous processes are conspicuous. In the adult brain, as the admirable investigations of Bevan Lewis and Clarke have demonstrated, a structural differentiation has been established in different areas of the hemisphere. In certain portions of their surface, the grey matter is six-laminated, in other portions it is five-laminated, the latter arrangement being more distinct in the parietal and frontal convolutions, constituting the excitable or motor area of the brain, where so-called giant-cells exist in irregular clusters or aggregations.

Now, we are still unable to say at what stages of growth this elaboration of cerebral structure takes place, but we have

grounds for believing that it goes on gradually, but not uniformly, the budding and branching of the cells commencing in certain territories or centres, and spreading from them in various directions. It is perhaps late in life before the multiplication of cells and the extension of their interlacements are at an end; for it is certain that the brain may continue to increase in size until upwards of thirty years of age, and that in every nerve-centre, structural complexity may be augmented long after the limit of bulk has been reached. Then there can be no question that the functional activity of the different centres is established at different epochs and perfected at different rates. The senses, the motor powers, the emotions, the intellectual faculties, do not come all at once, nor drop in fortuitously now and again; they present themselves in a definite succession, and with a strict regard to evolutionary precedence, in the infant, the child, and the youth, from the most simple reflex acts to the supreme efforts of will. Each centre emerges from its "antenatal gloom" at an appointed time, and each has a certain season prescribed to it in which to perfect its functions. Reflex centres that have been long laid down, like that for the respiratory process, are at once proficient in their duty; but intellectual centres of recent evolution are only brought tardily to do their work, under the direct influence of conscious effect. And between these are innumerable centres which arise in due succession into activity, and are engaged in training for very varied periods. The foot and leg centres are in advance of those of the hand and arm in their development, and the latter again are in advance of those for the tongue and lips. Chewing is commenced at the eighth or ninth month of life, but the sexual appetite does not assert itself until the twelfth or fourteenth year. Equilibrium is speedily acquired, but years are spent in mastering the niceties of speech.

Now, in each nerve-centre there are two kinds of activity, which must not be confounded with each other. There is nutrient activity and functional activity, and the rule would seem to be that these are generally in the inverse ratio of each other. When nutrient activity is at its maximum functional activity is at its minimum, and *vice versa*. When the brain of the child is growing most rapidly, its functional manifestations are not of the highest order; and when the brain of the man is doing its best work, growth may be said to be over. Growth precedes function, and yet function is, after a certain stage, essential to growth, and it is while growth and function co-exist that the opportunities for education occur. It is at the nascent period in the history of each nerve-centre, when growth-activity, although becoming less energetic, is still present, and when functional activity, although still feeble, is gradually gathering

strength, that most may be done to make or mar it and other centres with which it is associated. Then it is that, by suitable exercise and stimulation cautiously applied, it may be brought to the highest development of which it is capable. By skilful management this nascent period may be prolonged, and a superior anatomical substratum provided for subsequent developments; but by undue eagerness or negligence it may be curtailed or allowed to slip past unimproved.

The duration of the nascent period, as I have called it, in which growth and function go hand-in-hand, varies exceedingly in different centres. In those concerned with instinctive operations it cannot be said to exist, for their growth is completed without functional stimulation, and they start at once into full functional activity; but in those concerned in the higher intellectual operations it may apparently run on until late in life. But, whatever the duration of its nascent period, each centre requires extrinsic stimuli to develop its structural potentialities; and this is true of the lower reflex as well as of the higher discriminating centres. Dr. Allen Thomson hatched a number of chickens upon a carpet, and they ran about on the soft surface, and never attempted to scrape until a little gravel was sprinkled over it. The moment this was done, however, the appropriate gritty stimulus being applied to their feet and an impression conveyed to the nerve-centre, vigorous scraping commenced—a proceeding in which knowledge or discrimination took no part, for the object of scraping is to find insects or seeds, and, for anything such inexperienced chickens knew, these might be lodged in the carpet as well as in the gravel.

In higher and more complex centres we may discern the influence of extrinsic stimuli, not merely in inaugurating function, but in promoting growth and sustaining structural development. Gudden, a Swiss physiologist, has shown that when the nasal organ of a young rabbit is closed, the olfactory nerve and bulb of the same side are perceptibly atrophied in six or eight weeks; and that when the eye of a young pigeon is enucleated or shut up from the light, the optic nerve and anterior prominence of the corpora quadrigemina of the same side waste very speedily. And similar consequences apparently result in the cerebral centres of the human subject when they are early cut off from functional activity, even in the higher centres; for in two remarkable cases reported by Dr. Gowers and Dr. Bastian, there co-existed with congenital absence of the left hand, and with an aborted condition of the whole of the left upper limb in two adults, an imperfect or dwarfed condition of the ascending parietal gyrus of the right side, in which gyrus the individual and combined movements of the fingers and wrist are localised by Ferrier. Now, whether

we regard this gyrus as a true motor centre, or as a sensory region of the kinæsthetic type, it is clear that its growth was stunted by the curtailment of its functional activity during its growth period. But surely we are at liberty to conclude that had its functional activity been restricted in any other way than by congenital malformation, its growth would still have been restricted. We have long known that muscles when not exercised do not develop, and we have now reason to believe that the same is true of the highest nerve-centres. But muscles that have been fully developed, if cut off from exercise, waste and degenerate, which is not true of the highest nerve-centres; for it has been shown, in cases noted by Ferrier and others, that where a leg had been amputated in an adult who had lived many years after the operation, there was no alteration in the cerebral convolution corresponding with the limb, but only atrophy of the lumbar enlargement of the spinal cord on the same side. The lower and comparatively independent centre, with a narrow functional range, had suffered wasting; but the cortical centre, with innumerable cerebral connections, and its complex functions as a basis of motor ideation and of organic memory, had not degenerated, after the restriction of its fundamental activities by the operation.

These facts, that cerebral centres never properly exercised do not develop, and that, once developed, they do not waste, although cut off from those activities that insured their development, strikingly inculcate the importance of educating every centre at the proper nascent period, and the danger of neglecting education until the nascent period is over. They give also a new significance to physical education. Hitherto that has been advocated as a mean towards the improvement of health and the strengthening of the frame, and not as an instrument of mental development. The notion has been that muscular exercise expands the lungs, quickens the circulation, and braces the nerves, and that notion is correct; but to it must now be added the pregnant idea that it also contributes to brain-growth and mental evolution. A large district of the brain is made up of motor centres, and concerned in motor ideas, which form a no less important element in our mental stores and processes than ideally revived sensations. The growth of that district of brain is apparently dependent on muscular exercise, and if that be withheld at the growth period, the development of the brain will be stunted, and perhaps the whole series of ideas connected with form, distance, resistance, weight, &c., rendered faulty or incomplete. And not only so, but this district is made up of a series of centres in relation with different groups of muscles, and each centre is dependent for its development upon its own

group of muscles, and the defective exercise of any group of muscles during the growth period in its own particular centre (the growth periods in most of the motor centres, having different starting-points, although overlapping in various degrees) will result in dwarfing of that centre, and a corresponding hiatus, or a general weakness, must exist in the mental fabric.

From this we might deduce that swaddling-bands so applied at birth as to restrain all muscular movements, and kept on during infancy and childhood, would result in idiocy—a speculation to which the wretched muscular development of most idiots and imbeciles, and the fact that their mental training is most successfully begun and carried on through muscular lessons, give some countenance. We should also have to infer that, in order to build up a sound and vigorous brain, we must insure free exercise to the different groups of muscles in the order of the development of their centres, and must in no degree interfere with the natural sequence of their evolution. That being so, we must necessarily ascertain what that natural sequence is which is to be so important a guide to education; for, in our present ignorance of it, we may unwittingly be doing much mischief. Suppose that we are encroaching on the time at which the hand centres ought to receive their most valuable education—their nascent period—and are devoting that time to the cultivation of the tongue and lip centres, then we should be impairing the full development of the brain—disturbing the balance of mind, and sacrificing that technic skill in our artisans of the future which is essential to the maintenance of our national position. For the hand-controlling centre, if not fully exercised at its nascent period, can never afterwards attain to the highest cunning—witness the clumsy caligraphy of those who learn to write in mature life, even when they practise with more than boyish assiduity, and the inferiority of the work of any craftsman who has not served a regular apprenticeship to his trade. In these bewildered times, says Carlyle, all education has run to tongue. But it seems to me, that not only tongue but hand, and foot, and eye, and back, and every muscle in the body, must be trained in due season, if education is to do what we expect of it, and is to result, not in headaches, and imbecilities, and nervousness, and insanity, but in well-balanced growth of body and mind. The differences which we notice between man and man in deportment and gait and expression are but the outward and visible signs of individual variations in the development of the motor centres of the brain; and the stammerings, grimacings, twitchings, and antics which are so common and annoying, are probably, in many instances, the effects of neglected education of some of those centres, and might have been abolished by timely drill and discipline. Of

these centres, one group—presiding over the hand—ought, I think, to receive more attention than it now does amongst those who are not called upon to earn their living by manual labour. A cunning right hand is one of man's proudest possessions; and I go so far as to say that every man, no matter what his rank or fortune, would be mentally improved by learning a handicraft, and that every woman should be taught to use her fingers deftly in technic work of some kind. The most learned Jews have always followed trades; and Spinoza was not only a philosopher, but a maker of spectacles. "When we begin," remarks an eloquent writer, "at all to understand the handling of any truly great executor—such as that of the three great Venetians, of Correggio, of Turner—the awe of it is something greater than that felt from the most stupendous natural scenery; for the creation of such a system as a high human intelligence, endowed with its ineffably perfect instruments of eye and hand, is a far more appalling manifestation of infinite power than the making of seas and mountains."

In the hurried glance at education in its relation to the etiology and prophylaxis of nervous diseases, which has been alone possible to me to-day, I have chiefly referred to the motor-centres of the brain; but the principle of training in growth-periods is, of course, as applicable to the sensory and other centres as it is to them. The sensory centres are gradually and successfully developed; and the future complexion of mental life is in great measure determined by the impressions made upon them when they are undergoing development.

Art in the nursery is a subject well worthy of consideration; and efforts should certainly be made to put before children, especially those pent up in towns, good and worthy and beautiful objects at the time their minds are being formed. A little introspection will satisfy most men that pictures and images and forms presented to them in their earliest years enter largely into all their subsequent mental commerce, and sometimes influence their history for weal or woe. "The Edinburgh Castle rock," says Ruskin, "had a daily influence in forming the taste and kindling the imagination of every promising youth in Edinburgh." "The plea for art," says Watts, "rests on much wider and more solid foundations than mere amusements for moments of leisure. . . . Nothing is so likely to cure the widespread habits of intemperance that disgrace the nation as a taste for art and music generally developed."

I should have been glad to have spoken of the acquisition of speech, of the basis of attention, of the value of natural science as a branch of elementary education. If I say nothing of these subjects, nor of moral and religious training, it is not because I

underrate their importance in contributing to the harmonious development of the brain, but because time does not permit me to enter on so large a theme. As regards moral and religious training, I would say just this, that no one can study insanity without realising that to make men prudent and just and generous, is to protect them in great measure against those moral contagia which float about in such varied abundance in our social atmosphere, and which are so inimical to mental health. And no one can justly study the constitution of the human mind without, I think, perceiving that it contains emotional elements and religious feelings which, when cultivated, contribute to its strength and endurance, but which, when neglected, become sources of weakness and decay. To discipline the natural forces of character, and to place over the mind a pure and lofty ideal, is to take the best possible measures to insure its prosperity and peace. "Three-fourths of life are conduct," says Arnold, and three-fourths of conduct are imitation; and it is surely better to imitate an ideal than the men around us or the beasts that perish. In the former, we may have bound up whatever of beauty and goodness the universe displays or it has entered into the heart to conceive; in the latter we have a strange medley of good and evil, with selfishness in the ascendant—for selfishness must ever be the soul of the plot in that tragedy "The Struggle for Life," with its hero "The Conquering Worm." But, besides the struggle for life, there is the struggle for light—an inward struggle, employing no brute force, dealing no death around, but terrible in its earnestness, and fraught with disaster to many minds. For that struggle, as well as for the life struggle, the mind should be prepared. It cannot be overlooked in any system of education that aims at completeness. And it is at completeness that all systems of education must aim. Only when that is attained, when body and brain and mind are harmoniously developed, shall we be able thoroughly to reconcile progress with health. In the meantime, we must labour in that direction, and strive, as best we may, in this dim dawn of biological science, by a timely and well-adjusted cultivation of sense, motion, and intellect, moral and religious feeling, to resist the inroads of nervous and mental disease, and of every foe that may assail us from without or within, and to secure to our country what is stronger than fleets of ironclads, more inviolate than the streak of silver sea—

A virtuous populace who rise the while,
And stand a wall of fire around their much-loved Isle.

ART. II.—ASYLUM SUPERVISION.*

BY NATHAN ALLEN, M.D., LL.D.

Lowell, Massachusetts, Commissioner in Lunacy to the Commonwealth of Massachusetts.

ONE of the most important questions in respect to public institutions is the proper supervision of Lunatic Hospitals. Boards of State Charities are especially interested in this subject. The members of these boards appointed from the different professions, and from all classes of business men, have the best means of knowing what is the present management of these hospitals, and whether there is need of better supervision. The greater the knowledge possessed on the subject, and the more thoroughly the matter is investigated, the stronger will be the conviction, we believe, that there is need of change or improvement in this direction.

It is proposed to inquire briefly—First, what is the present management of such hospitals; and secondly, what constitutes a *proper supervision* of them. As nearly all these institutions are built by appropriations from State treasuries, there is great similarity in their appointments and government. There are a few hospitals or asylums for the insane established by municipal authorities and private corporations; these are managed by officers or trustees appointed by very different bodies from those called State institutions. There is still another class of asylums or establishments for the insane, which are generally small, and in one sense strictly private, as they are owned and managed by individuals.

It is the large hospitals owned by the State, and for the management of which the public are for this reason responsible, that come especially under our present inquiry. What, then, is the management of these institutions? The primary power is lodged with the Governor and Council. They appoint five or more trustees to each hospital, who choose a superintendent. The assistants and attendants are generally appointed by the superintendent, or nominated by him, subject to the approval of the trustees. All rules and regulations for the management of the officers and inmates of the institution are prepared by the superintendent and trustees, though in some instances they must be approved by the Governor and Council

* Read before the National Conference of Charities at Cleveland, Ohio, July 2, 1880.

Thus the whole responsibility and power of government is placed directly in the hands of the superintendent and trustees. It is true there are powers lodged in other bodies, and provisions made for some oversight of these institutions, but they are so constituted that they are not often exercised or made available for purposes of improvement and reform. The law provides in most States that the Governor and Council should have a general oversight of public institutions, making regular or occasional visits. The Legislatures in all the States not only enact laws for the support of, and management of these establishments, but appoint committees from time to time to visit them. But the oversight and visitation of both these bodies are rather formal and ceremonious. Their visits are generally made at set times, in a body, with previous notice, and not unfrequently in a hurried manner. It is impossible for them to make a thorough examination into all the internal affairs of an institution, or into all the details concerning the condition and treatment of its inmates. Unless some charges of abuse or complaints have been made, these bodies never make special examinations, nor interfere with the government and management of hospitals. No great improvements or real reform can be expected from such oversight. There is another agency established in several States, intended to exercise some care and oversight of these institutions, viz. Boards of Charities. The original design in the establishment of these boards was a most wise and beneficent one. It was found by large experience and wise counsel that something was wanting in the management of institutions; that there was need of far greater watchfulness and more definite information and statistics, whereby comparisons could be made, extravagance checked, abuse prevented, and improvements of various kinds started. These boards have already done immense good, and with some modifications their usefulness may become more permanent and widely extended. But, as the organisation of these boards confine their duties wholly to visitation and report, with very limited powers, they cannot exercise that supervision over lunatic hospitals for improvement and reform which is absolutely necessary. The labours and reports of these boards have brought before the public such information, facts, and statistics, concerning these hospitals, as to show the great need of some changes or improvements for which legislation as yet has made no adequate provision.

What, then, is the kind or character of the supervision required? It may be very properly designated a Lunacy Commission. It should consist of three or more persons, according to the number of institutions or extent of the field.

Its members should be compensated according to services rendered. They should be appointed for a series of years by the executive of each State, without regard to political party or personal favoritism. This appointment should be based solely on their qualifications, or fitness, or interest in such work. They should hold at the time no connection with any local institution. Their powers and duties should be co-extensive. They should have a general supervision, with full power, over everything concerning not only the management and government of the institution, but also the care and treatment of its inmates.

A commission thus constituted might justly be held responsible to the public and to the higher powers of appointment. Its recommendation to legislatures, with respect to appropriations and the enactment of laws, would be valuable. Its reports would serve to enlighten the public in such matters, creating everywhere greater interest and confidence in such institutions. The question may be asked why lunatic hospitals require different or more supervision than other institutions? The following may be given as some of the answers. The appropriations for this class are greater than for any other, and the expense upon each individual is larger. The insane are more dependent and helpless, and require different treatment. It is not the body, mainly to be provided and cared for, but *mental* disorder, which involves interests of a far higher nature, and more important in results. The *rights* of the insane in respect to personal liberty, family relations, and property are taken away under circumstances where there is danger of injustice and wrong doing; besides, they are brought together in large numbers, and confined in close quarters; placed under attendants where there is liability to abuse of various kinds. The difficulties and responsibilities attending the proper treatment of the insane are so great that they require constant watchfulness, and the most careful oversight. Experience proves this. Cases of improper committal and detention, of wrong treatment and abuse, are often brought to public notice, showing the need of constant vigilance, and the most careful oversight.

The need and importance of such oversight is very clearly stated by the Rev. Dr. Bellows, of New York. Says Dr. B., "Insanity and Insane Asylums require far more inspection, study, and attention—far more publicity in all that touches their management—than they now receive in this State or county. The public is profoundly interested in being reassured by persons whose testimony is beyond suspicion, that this helpless and wretched class, the insane, are not neglected, abused

and made worse instead of better, by our public institutions. They need and demand to know that persons of the highest character and *enough of them to guarantee sound judgment*, are incessantly busy, looking into the state, studying the complaints and protecting the rights of those who are incarcerated in public asylums. It is in the *nature of things* that *abuses* from pressure of call, from induration of sensibility, from force of routine, from pride of authority, from limited experience, from the *inertia* of custom, should creep into asylums for the insane. Eternal vigilance from the representatives of the public anxiety, who have no interest except that of humanity, can alone keep either prisoners or asylums from degenerating, or from becoming stereotyped in effete prejudices of management." That we may have a better and clearer view of the subject, let us take different points of observation. There are four great interests or parties that require such supervision :

1. The institutions themselves. In all large establishments evils and abuses of some kind will spring up. The fault may not be directly on the part of the managers, but more with the sub-officers and attendants. The most effectual way to discover and correct these evils has been found by authorities outside, charged with such duties. Correction or reform seldom come from local officers. Besides, such is the peculiar relation of lunatic hospitals to the public that prejudices and distrust will prevail more or less in the community in respect to them unless provision is made for proper supervision. This distrust is not only exceedingly annoying to the officers of the hospital, but causes great injury to the public and the best interests of the insane. It frequently prevents persons in the first stage of insanity from being sent to the hospital, where they might be cured. It impairs the confidence of the insane in the physician and his treatment.

Again : There is always room for some improvement in every institution. This is far less likely to come from persons constantly occupying the same point of view, and following day after day the same routine of duties, than from those looking from different and distant points of view, who can compare one institution with another, and make careful observations over a large field. Hence, the necessity in such management of more diversified experience, more general knowledge and larger observation than local officers usually have, whose labours and interest are almost wholly identified with one single establishment. In no other institutions or corporations in the country, are individuals charged with duties and responsibilities of such magnitude as the officers of lunatic hospitals, and nowhere else are counsel, skill and wisdom of the highest order, so much

needed as here. The lunatic hospitals of Great Britain are provided with these advantages in a Commission of Lunacy. Superintendents, trustees and commissions all work harmoniously together for the best interests of the insane. The Lunacy Commission has been in operation in England over thirty years, and that in Scotland over twenty years. It is admitted on all sides that the most beneficial results have been brought about by the agency of these commissions in the improved management of hospitals and the better treatment of the insane.

2. But the *class* that need such supervision most, are the inmates of these hospitals, the unfortunate insane, the most helpless and dependent of all human beings. They are forcibly removed from home and friends. The law takes away from them their rights in respect to personal liberty and the use of their own property; it unsettles them in all business relations and in the duties they owe to their families; it destroys the confidence which the public once reposed in them, and cuts them off in a great measure from intercourse and communication with their friends, as well as exposes them to personal abuse from attendants and others. Where such personal and fundamental rights are taken away or very much abridged, should not legislation make better provision for protection, defence and appeal than generally exist? No proper provision is made by the courts that is available to them. They certainly cannot look to the Governor and Council at a great distance, nor to a Legislative Committee meeting once in a year or two, and making occasionally a formal visit to these hospitals. It should be a provision available and ready at hand, one in which they have confidence.

It may be said the insane have always the superintendents and trustees for counsel and protection. This may be true to some extent, but, then, how frequently are the insane brought to hospitals by deception, cherishing strong prejudices against these establishments as prisons, conscious that they are deprived of their rights, and look upon the hospital officials as their oppressors. Besides, such is frequently the type or nature of insanity, that it leads the insane to distrust those immediately about them, and to look elsewhere for aid and counsel. That the insane may receive the full benefit of treatment, whatever the means may be, whether by medicine or other appliances, how important it is that they have confidence in these means, and in those having a constant oversight of them! In the treatment of other diseases, this confidence is regarded as indispensable, and great pains are taken to secure it by counsel and in many other ways. In diseases of the mind, it is still more important.

But the distrust cherished by the insane of hospital officials does not arise wholly from prejudice, or a diseased mind, but, from this fact, they find by experience and a variety of circumstances that everything affecting their interests is virtually placed in the hands of *one body or one man*. It is true there are local trustees, having care and oversight of the hospital and its officers, but as a general thing they know very little about insanity or the treatment of individual patients, making short and formal visits, depending almost wholly upon the superintendent for information. He is moreover appointed by the trustees, and is their executive officer. The interests, business and reputation of both parties are so closely identified that they constitute really one *governing body*. Such is the interpretation placed upon it, not only by the insane but by large numbers outside of the hospitals. Though a wide difference may be found in different hospitals as to the relations and doings existing between these two parties, the impression prevails very generally, that the power, in its controlling influence, is virtually exercised by the executive officer. It is needless to dwell here upon the objections to a *one man power*.

Two years since, an English gentleman, who had been a Government Inspector over twenty years in Great Britain, and whose constant business was to visit hospitals and workhouses, came to the United States to obtain certain information about our public institutions. After inspecting carefully several lunatic hospitals, he remarked that he was struck with the different appearance and conduct of the insane in hospitals here and that in England; that among the insane he saw here there was a constant restlessness, a complaining spirit, seeking protection and counsel of every one passing, as though there was something wrong or wanting; whereas, in the British hospitals, there was a quiet contentment, every intelligent insane person feeling and knowing that their *rights* were protected by Government, and wrongs and abuses could not exist without being exposed and corrected. This was proved to them by frequent visits of the Commissioners in Lunacy, hearing their complaints and settling difficulties. Cannot a Republican Government make some similar provision for the most unfortunate of all its subjects, suffering more or less daily for the want of it? There are other points wherein the insane need this outside supervision, such as personal liberty, mechanical restraint, seclusion, correspondence, detention, ill-treatment of any kind, real or imaginary, etc. In case, even, were there no wrongs or abuses, what a relief would it bring to their mind in a suspicious and disturbed state to know and be assured that their individual cases are all looked after, and that no real harm can befall them?

The English gentleman referred to before, after inquiring into the management or provisions made for the government of our hospitals, remarked that it was very different in Great Britain, that the rights and interests of the insane there were more carefully guarded, that every insane person knew he had influence and power at headquarters, and that the Government was *his friend*.

In a Government made "by the people and for the people," cannot the rights of its feeblest and most needy subjects be protected? Can neither democracy nor republicanism do it? Most assuredly, it can and will as soon as the means and ways are understood. No intelligent or thoughtful community will always rest easy in such a state of things, or be satisfied with present legislation on this subject.

3. The *third* party demanding this supervision, is very numerous, including the friends of the insane and the public at large. These hospitals sustain a most intimate and important relation to the community, different from any other institution. Every member of society, every man and woman, must feel an interest in them. Who is not liable to be insane or have a friend thus affected? Every voter and taxpayer should feel an interest in them, inasmuch as the money for building them comes directly from taxes, and was appropriated by legislatures representing individual voters. Besides, the moneys constantly used for defraying the expenses of running these hospitals and paying the salaries of the officers in charge of them, come mainly from taxpayers, however small these taxes may be.

While superintendents and trustees have the immediate charge and control of these institutions, they do not own them, neither were they built or are they run for their emolument. In one sense they are masters, but in another, from a higher and broader view, they are servants. While they have their rights, and their opinions are to be respected, there are parties inside and outside of hospitals who also have rights therein, and whose opinions are entitled to consideration. The claims and interests of the latter parties are vastly greater and more important than those of the former. In fact, the real interests of those in charge of these hospitals are trifling and insignificant compared with those of the insane and their friends. On the side of the latter not only far greater numbers are concerned, but the healths and lives of multitudes are more or less involved in the issue. Under these circumstances, it would seem that the insane should have the wisest and best supervision that can possibly be provided—that the principles of humanity, of justice and common sense, demand it. Such supervision has been found in the Lunacy Commissions of Great Britain and Scotland.

The most beneficial results have followed the labours and reports of these Commissions, which may be best described in the language of one who was superintendent for a long time of the largest lunatic hospital of New England, and who has visited those abroad.

This gentleman, Dr. M. Bemis, of Worcester, from his own large experience and personal knowledge, is abundantly capable of forming opinions and making comparisons. In answer to the inquiry what improvements have been made in the lunatic hospitals of Great Britain, and what relation does the Lunacy Commission hold to these institutions, makes this statement: "The improvements are many. They have supplemented and modified this system to such an extent, that while it bears some resemblance to the past, the present is studded all over with new features. The improvements for ventilation, cleanliness, classification, for freedom, both outside and inside, are most noteworthy. Their advances, in the direction of labour among the patients, in the immunity from physical restraint and seclusion, in the granting of innocent indulgence to trustworthy patients, are far beyond what is now practised in any American hospital. The Lunacy Commission has done much, and its continued operation is of incalculable benefit, not only to the insane, but also to the officers of the institutions. They have improved the condition of the insane in many ways, and have rendered a residence in a lunatic asylum less irksome and hopeless to those who are obliged to submit to the restraint and treatment in a public institution. They have removed the hard and forbidding cruel fixtures for restraint and seclusion. They have well nigh emancipated the insane from the use of mechanical restraint; have quite abolished every kind of punishment and task; have raised and improved the quality of food and clothing. They have opened the apartments of the furious and filthy to the sun and air, and opened the doors, that all may enjoy, in some degree, the freedom of the several establishments. More than this, they constantly act as guardians for the insane, and then strongly support and strengthen those who conduct faithfully the affairs of the asylums. They have a systematic correspondence with every institution, and by reports of officers of each, they know, not so much the economies of each, but what is better, they have an understanding of the commitments to such an extent that they can easily tell the justice and propriety of any questionable case. They are made to know of all cases of restraint and seclusion, and they interest themselves in every case of hardship, and thus lighten the burdens of the insane, without in any way increasing the cares of the officers. From their frequent inspection of the several institutions, and from

the mass of facts gathered by their correspondence, they publish every year a valuable report of their labours, with plans, suggestions, and histories of cases of hardship, abuse and suffering." When the great advantages, as here described, arising from a Lunacy Commission, are considered, it would not seem possible that the superintendent of any hospital would or could oppose such a supervision. The insane are not the only parties benefited, but the hands of the trustees and superintendents are supported; much of the prejudice existing against these institutions and their managers would disappear; less complaints would be heard from the insane and their friends, and far greater confidence would be placed in these hospitals by all classes in the community. But what is the attitude in which superintendents place themselves in respect to such supervision? Some years since, as a body, they passed a resolution affirming that "the appointment of Lunacy Commissioners with a view to official visits or any supervision of State institutions for the insane, is to be deprecated, as not only wholly unnecessary, but injurious, and subversive of the present efficient system of control by trustees appointed by the State executive." It may be said that this resolution was adopted by a convention of superintendents years ago, and that the sentiment is not generally endorsed by them at the present day. It is gratifying to know that here and there a superintendent is taking a more charitable, a more liberal and enlightened view of things: but, at the same time, the adoption of a Lunacy Commission has been bitterly opposed for years, and that, too, in a variety of ways, by hospital officials; in fact, the chief opposition comes from this particular quarter. In confirmation of this statement we might recite some facts and circumstances which occurred this very year in New York and Massachusetts.

When it is considered that a Lunacy Commission, properly conducted, is calculated above all other agencies not only to inspire public confidence in these hospitals, and improve the condition and treatment of their inmates, but also to stay up the hands of superintendents and strengthen their administration, it is surprising that they should ever oppose it. In fact, they should be the last to oppose it and the first to welcome it. But great advances have been made within a few years in public opinion on this subject. It is being found out that people have *rights*, and, when more generally understood, will maintain them. The world moves—the progress of science is always forward. Reform is only the work of time.

Again, in these large establishments questions frequently arise, the settlement of which need just the advice and counsel which such a commission can give. Differences of opinion

sometimes occur between the friends of a patient and the superintendent as to treatment, or how long the person must remain in the hospital, or when he can return safely to his home; also, differences arise between the overseers of the poor of cities and towns and the hospital officials as to the removal of pauper insane persons to almshouses or other places of support. In such cases the intervention of a third party is very necessary.

Then the question of a more complete classification of the insane, both on the score of humanity and economy, should receive far greater attention than it has hitherto. Instead of building palatial residences at immense cost, and herding together such large numbers of the insane, let the chronic class, comprising fully two-thirds or three-fourths of the patients in hospitals, be provided for at less expense in asylums or other establishments or homes, furnishing advantages better adapted to these persons than large and costly hospitals. In every point of view this question is one of vast importance, and requires all the consideration and wisdom that any kind of Board or Commission could give to it.

Another question closely connected with the above, is the great increase of expense for the insane. This class is increasing relatively; not only faster than population, but also faster than either of the other dependent classes. The support of the insane is becoming really burdensome in every State, and is likely to become more and more so every year. A careful review of the provisions made for the insane shows that much of this expenditure has been needless and extravagant, particularly in the construction of buildings. The opinion, moreover, seems to be pretty well established that the present management of our lunatic hospitals and the treatment of the insane, are in many respects far behind those in Great Britain. This is the testimony of foreign alienists who have visited our institutions, and are capable of making comparisons. It is very evident that some improvements or reforms are greatly needed among us. Are these likely to come from experts in one thing, from head officers of our institution or from members of legislatures constantly changing? Do we not need men of large and diversified experience, of special fitness and qualifications for such business; men who can devote time, labour, and thought to the work; in other words, a good Lunacy Commission?

Again, it is obvious after all that the advantages growing out of such a commission must depend almost wholly upon the character of the persons placed upon it. It must be composed of men thoroughly posted in these matters, men heartily interested in the work, men who have the confidence of the public,

and especially of the advocates of reform. The community, as well as the cause itself, demand something more than the mere name of a Board or Commission of Lunacy.

Such is the interest and intelligence accumulating on this subject that no well-informed people will always rest satisfied with the present order of things, nor remain content unless executive and legislative bodies take some advanced steps for improvement in this direction. How much better is it for the hospitals and all parties concerned that this interest and intelligence should be wisely directed, and result in some permanent good, rather than that it should be wasted in excitement, in sensational reports, in exposures and attacks on our hospitals?

Superintendents and trustees, in their reports and through other channels, complain that this fault-finding and prejudice against them and the hospitals, are very annoying, and when the complaints become somewhat bitter and personal, they feel as though they were abused and insulted. But who is to blame? Are there no causes or reasons for it? When it is considered that a large number of persons are deprived of their rights without adequate means of protection, are confined in close quarters, not accessible to their friends, where it is understood abuses and wrongs are sometimes perpetrated—so reported by the press and individuals that have experienced them—is it strange that the friends of the insane should express uneasiness and anxiety, and that the community should join with them in sympathy and complaint? One of the special duties of the English Lunacy Commission is to exercise a careful oversight of the hospitals with reference to abuses, wrongs, accidents, &c., preventing and correcting them as far as possible, and making reports upon them whenever they occur. This course satisfies the demands of the public and creates confidence in these establishments.

The *fourth party* interested is the *future* or *humanity* itself, aspiring to a broader and higher civilisation. Its aim is equal rights. Its practical application is the 'golden rule.' Its design is to do the largest amount of good—to enlist the best possible agencies. We have here a great evil, insanity, constantly increasing, occasioning immense expense and an untold amount of suffering. This evil is the result of violated law, physical and mental; it is abnormal, no part of a true, healthy civilisation. To check the evil, its *causes* must be better understood, the public must be instructed and enlightened on the subject. As prevention is better than cure, it is our duty to do something in this direction. It is not wise to build great establishments and make large appropriations for carrying them on, without doing something to remove the causes which necessitate such measures.

Within a few years great advances have been made in a better understanding of the causes of disease and the laws of health. Special pains have been taken by means of boards of health, books, journals, lectures, &c., to diffuse a knowledge of hygiene and sanitary agencies. The fact is fully established that, by a proper application of these means, one-third of the sickness and premature mortality may be prevented. But how is it with insanity? What have hospitals and legislatures done to prevent it? If a very small portion of the means now employed in the construction of buildings and the support of the insane were expended in different ways to *prevent insanity*—in cutting off the supplies—what a vast difference it would make in the expense! It should be the settled policy of all legislative bodies and the executive officers of every State to carry on some systematic measures of this kind, and unless such provision is made by legislative action, the work will certainly not be done at present. While there is need of improvements in the management of hospitals and in the better treatment of the insane, something should be done at the same time to prevent the increase of this great evil. The claims of humanity and economy demand it. And in no other way, and by no other means can these objects be so well secured as by the establishment of a good Lunacy Commission.

ART. III.—THE CENTRALISATION OF ENERGY.

By EDWIN WOOTON, Hon. Lecturer on Physiology and Psychology to the Society of Science, Letters, and Art of London.

No man can judge accurately of the consciousness of beings other than himself, save from external phenomena. In saying this, I do not mean to impeach that department of psychology known as "mental communion," for this latter condition is abnormal, and I am here dealing with the common life. Language, in the ordinary sense of the word, is a gift enjoyed by no earthly being besides man, yet the lower members of the animal world exhibit phenomena which man ever recognises as indicative of their mental state. The reason of such recognition is very simple—immediately we advance our inquiries beyond our own kind, we can only judge of mental states from analogy; nay, we are restricted to this when we are dealing with those of our own species who are dumb and possess no means of verbal communication.

Even in his highest condition man is constantly showing by outward signs the thought or impression of the mind, and being aware of the limited faculties of the brute, he confines his expectation to its known ability of expression; in other words, if the actions which in man are associated with some particular emotion or sensation are performed by the brute, so far as its ability permits, man attributes to the inferior animal the same mental state.

Nevertheless, the analogical reasoning of many becomes narrow, and of these some lay it down as an axiom that no animal in whom a distinct cephalic ganglion has not been developed can possibly *appreciate* impressions; others, not embracing the above view, yet hold that where a cephalic ganglion exists it is the sole seat of volition and sensation, and assert that deprivation of such ganglion leaves the animal either lifeless or a mere automaton—in any case, a non-sentient, non-volitional piece of organic matter.

Two questions then arise for our consideration:—

First—Are volition and sentience faculties common to the animal kingdom?

And next—What organs are necessary for their manifestation?

The importance to biological science of a correct solution of these problems it is difficult to overrate. In animal physiology—every fact discovered, every law demonstrated, every secret wrung from the bosom of nature is a stone cut and

smoothed, and which will find its place and duty in the great fabric which science is building in the very presence of, and as a defiance to, the assaults of ignorance and disease.

It is then to the task of such a solution I have set myself, not by the pursuit of a mere abstract argument which had availed little or nothing to the discovery of the truth, but by the patient study of experimental phenomena on which alone true theories can be based.

For attacks and criticism I am prepared ; I fear neither. If my conclusions are false, in God's name let them depart to "the limbo of forgotten errors." If true they will gather to them supporters, and will prevail over all opposition, and thus another beam of light from the sun of His wisdom shall scatter some, at least, of the shadows thrown across the path of science.

THE CENTRALISATION OF ENERGY.

ALL bodies—animal and vegetable—are composed of a substance termed Protoplasm ; this is a chemical compound represented typically by the following analysis :—

C	.	.	.	.	.	53·5
H	.	.	.	.	.	7·0
N	.	.	.	.	.	15·5
O	.	.	.	.	.	22·0
S	.	.	.	.	.	1·6
P	.	.	.	.	.	0·4

Physically the basis of life varies from semi-viscosity to the hardness of ivory ; the former is its simplest state, and that which is always found in the least organised animals, the latter condition and all intermediate states, are produced by the addition to the protoplasm of various chemical substances. Protoplasm exists in the form of minute circumscribed masses, to which the term "cell" is applied. With our present knowledge the least differentiated beings which can with certainty be assigned to the animal kingdom are the Monera. These are minute marine animals utterly destitute of organs : their bodies are not homogeneous, but consist of two parts—first, an outer, more dense and apparently structureless portion, which answers to a membrane, covering, or cyst ; and secondly, the greater part of the body substance, which is granular, more fluid and mobile.

It is in the Gregarinidæ that we first see an alteration in the animal structure. An adult Gregarinida differs structurally from a Monerum in this respect only—there is in one portion of

the body of the former a harder particle, termed the nucleus, enclosing another, the nucleolus; of the purpose of these parts we shall speak by-and-by.

In the *Amoebæ* there is added a contractile space, concerned in the circulation.

The *Foraminifera* possess an external covering or shell.

The ciliated *Infusoria* have a permanent oral aperture and digestive cavity, and the exterior of the body has at one or more parts vibratile appendages termed cilia.

Rudimentary eyes make their first appearance around the circumference of the necto-calyx in the *Discophora*. Rudimentary organs of hearing are found in the same animals and in the same region. The eyes, or "ocelli," are segmented cells the auditory organs, or "vesicles," are rounded sacs lined by epithelium, and containing one or more solid motionless concretions composed of carbonate of lime, immersed in a clear fluid.

A differentiated nervous apparatus first shows itself in the *Ascidian Mollusc*. It consists of one ganglion situated in the neighbourhood of the mouth in the mantle, and giving off cords which proceed to the sense and digestive organs, the muscular sac and both orifices. Next above the *Ascidians* we may place the *Ctenophora*, in which, within the apical pole, that is the end farthest removed from the mouth, is the *Ctenocyst*, a spherical vesicle; this, which is a sense organ, rests on a small ganglion giving off fibres. In the *Actinidæ* there is a system of branches supplying the ocelli, at the bases of the tentacles, and also the muscular tissue. Mingled with these fibres are cells or ganglia. The next well marked stage of development may be seen in the *Echinoidea*. There is a ganglionated cord surrounding the gullet, and sending off five branches among the ambulacral spaces. The *Annulosa* have a chain of ganglia running the length of the body and united by nervous cords. At one extremity where the sense organs are situated, the last post-œsophageal ganglion gives off two cords; these pass one on either side of the œsophagus, and enter each a pre-œsophageal ganglion—the cephalic—this ganglion is generally double. This description applies to all annulose animals, but the highest members of the order—the *Insecta*, have two cords passing backwards from the cephalic above the ventral ganglia, and giving off branches to them and the body walls, &c.

This is the most rudimentary form of the cerebro-spinal system.

The *Vertebrata* are animals in whom a vertebral column is present. Such column may persist in the rudimentary form of the notochord, or may be developed into a bony axis composed

of distinct segments. The body consists of two tubes; the greater, the anterior—containing the viscera of digestion, excretion, and circulation, and a lesser, the posterior, containing a nervous cord which anteriorly is connected by nerves to organs of sense. The vertebrate with the simplest nervous system is the lancelet. The neural axis of this animal is a delicate tract of nucleated cells surrounded by a coating of pia mater. It tapers to both ends, more, however, towards the posterior. Fifty or sixty pairs of nerves are given off laterally. In the diodon the cerebro-spinal column has its anterior extremity enlarged into a distinct cephalic mass, behind this there is a portion of the column, from four to twelve lines in length; this shows transverse white striæ and contains grey matter; it is a nervous centre and a portion of the brain. The rest of the neural canal is occupied by a “cauda equina.” The lampreys and hagfishes are of a higher nervous organisation than the above. They have a cartilaginous cranium, and the spinal cord extends slightly anteriorly; but there is no bony spinal column, and the notochord is persistent. The cord in the diodon is divided by shallow anterior, posterior, and lateral fissures. The posterior fissure at the cephalic extremity is deepened, and the halves diverging expose grey matter.

In the cod and shark the posterior fissure widens and the halves of the cord expand; the nerve tissue bounding the myelonal canal becomes swollen and rounded, and the columns diverging as they advance, expose an intermediate nodular tract. Two lateral “vagal” columns also project into the ventricle from the conjoined restiform and posterior pyramidal tracts.

The next structures added are a cerebellum and crura cerebelli.

The primary division of the brain may be said to consist of a medulla, a cerebellum, and one or two appendages of no great importance. Relatively it is both larger and more complex in fishes than the higher vertebrates. The brain is essentially the developed cephalic portion of the cord.

The second division consists of the “optic lobes.” This is generally the largest division in osseous fishes. Beneath the “lobes” are two subspherical bodies, “hypopharynx,” separated by walls containing a cavity, which is the homologue of the third ventricle in man. This ventricle is prolonged downwards into the pedicle of the pituitary gland and upward into that of the pineal gland.

From the third ventricle fasciculi are continued forward to the anterior aspect of the optic lobes, where they form two small masses of grey matter: these are rudimentary cerebra.

While the brain of the crocodile is scarcely larger than the thumb of an adult human being, that of the bird has expanded

both laterally and vertically, but is still composed chiefly of the optic lobes and the cerebellum.

In the dog and in other animals the brain has advanced more anteriorly, and the cerebra have coincidently developed. The degree of such advancement and development being of course collateral with the animal's degree of intelligence. This rule holds sway even amongst the various human races.

It can with certainty be demonstrated that porosity is a property or condition of all matter; contact is never absolute, but always relative. The composite particles of the protoplasmic cell are, therefore, not in coaptation, but separated by infinitesimal pores or spaces. The passage of material in a state of fluidity through such spaces into the cell substance is termed intussusception. The cell ordinarily maintains its existence by means of this process. Under certain circumstances, however, the protoplasmic cell, if capable of extension, as in the amoebæ, will flow round and encompass a solid particle of nearly its own diameter; it will then accomplish the perfect digestion and assimilation of its prey. The modification of protoplasm is termed differentiation; the latter is both structural and functional. As I have said, the simplest cell presents merely a slightly condensed margin and a granular homogeneous body substance. But as the pedigree of the free cell lengthens, canular spaces become marked out; the protoplasm bordering these channels assumes a more active part; there is an increase of energy in certain paths for the benefit of the whole body. Thus, then, the simplest structural differentiation is the relative consistency of the ectoplasm and endoplasm; the simplest functional differentiation is their relative activity.

The functions of the nucleus and nucleolus are sufficiently evident; by their segmentation they commence the process of proliferation by cell division.

The contractile vesicle of the amoeba is the simplest form of a circulatory apparatus to be found in the animal kingdom; the fluid which it propels is the food of the animal derived from the medium in which it is living.

The differentiation of function we have been hitherto considering is merely the increased localisation of contractility.

The latter condition might at first sight appear to be exemplified on the vibratile cilia of the monera, but this is not really the case. The cilia of these animals are no more vital in function than the remainder of the protoplasm, for they are retracted and fresh portions of the body substance protruded. Their movements are merely due to their relative length and fineness. In a similar manner the emission of amoeboid pseudopodia can be regarded only as a special manifestation of the vitality of the whole protoplasm.

There is, and must be, in every animal the action of individual parts for the benefit of the whole. What, then, is the difference between the simple protoplasmic cell and a body possessing the nervous-muscular and other tissues?

The answer to this will appear as we proceed. Ordinary protoplasm exhibits a gradually increasing localisation of energy or function in certain parts and cells, producing a progressive differentiation of structure to perfect nerve and other tissues.

Differentiation of structure then is the sequence and accompaniment of differentiation of function, and is produced by persistent maintenance, with gradual increase of, function.

Objects external to any being possess the properties of form, extent, specific gravity, density, temperature, colour, and chemical constitution. They have position, and may give rise to aerial vibrations.

Position is the one and only property of all matter. Size, form, specific gravity, density, colour, temperature, and *vitality* are merely due to the arrangement of the constituent parts.

Temperature is the result of the constant positing of material to a greater or less degree; the positing varying as the heat. Chemical combinations are, of course, the result of position. Chemical elements are probably but one form of matter, having their infinitesimal particles differently arranged. These properties then constitute an *objective* differentiation, and if there be a *subjective* differentiation of individual beings, it must be correlated to the former. The sense faculty in man is separated into five divisions—sight, hearing, touch, taste, smell. The organ of sight can appreciate size, apparent density, and colour. That of hearing can appreciate sound only. The organs of touch estimate size, density, and temperature, and this last whether the skin come into contact with the object, or the sensation be communicated by a medium. Smell and taste distinguish empirically certain chemical states. The latter being constant, the sensation excited is also constant. Approval or dislike is merely a judgment on the merits of the sensation.

The objective qualities of matter, its objective differentiation, are always present. If we select a particle 100,000th in. in diameter, we have a circumscribed portion of matter possessing form, gravity, density, colour, &c. We could not see it if we hadn't it under the microscope; but it is evident that the simple free cell is possessed of a capability of appreciating the presence of minute atoms, for the said cell captures and digests the particle in question.

Probably the simplest sensation is touch; undoubtedly, as shown above, the cell possesses this. Yet this sense must

differ in kind from our own. Contact must in the microscopic animal of which I am speaking, excite a sensation of chemical combination or condition, interpreted by the being as edibility, for the cell will reject unsuitable food.

The qualities then required for a living sentient being of the cell's anatomy, would be the capability of appreciating contact with substances edible and inedible; i.e. with beneficial and injurious objects. Now, since the animal does not show his appreciation of objects unless he be in contact with them, we must suppose contact the sole medium of sense. Now contact can only give rise to an idea of the properties of the article in contact, and of the parts in actual apposition. We know also that sight depends on waves of air, and cannot be communicated by contact of a tissue with a substance. Sight may be a variety of touch, but we have no reason to suppose that anything analogous to the sensation can be excited by direct contact. Considering, then, the *objective* properties of the particles constituting the cell's food, we may form a good notion of the *subjective* properties of the cell. Thus then the subjective is correlated to the objective.

We shall see that as the body becomes by hereditary education more capable of appreciating the properties of matter, separate cells become appropriated to the consideration of one or more of these properties. The action itself modifies the tissue into the form most suitable for it, and this by use is elaborated, and by heritage perpetuated. Differentiation of sense is correlative with differentiation of tissue. The former being the starting point: life is the cause of organisation.

The nervous, muscular, and other systems are merely the total assumption in an animal by certain cells of the common properties of protoplasm. In any being, if we perceive phenomena indicating the possession of sense, we must attribute sense organs to that being. The whole body may be a medium of sensation, in which case it is only perceptive by immediate contact. Yet we are not to assume that such structural differentiation must be visible to the eye. It may be that certain cells or particles in a body may assume any one of the common properties of protoplasm to a greater extent than the remainder, without undergoing any immediate structural differentiation. Neither are we to assume that where an animal can appreciate the presence of an object only by immediate apposition, the tactile sense is so simple as on the epidermal surface of man. On the contrary, we are forced to believe that since the higher tissues of the vertebratæ are merely the elaborated protoplasm, so the differentiated senses of the former are found in the latter, as embryonic undoubtedly, but more com-

plex than epidermic touch. Then is the protoplasmic cell percipient?

All tissues are composed of this substance in a simple or modified condition. Now, all inquiry tends to show that percipience is not a property of any tissue, but that it is merely a *viâ animi*. Were, however, this opinion to be proved false it would not affect the question. Percipience is not a visible phenomenon, we judge of its existence in any being other than ourselves merely from analogy. Again, the remaining properties of the tissues of the highest animals, e.g. assimilation, contractility, and excretion, are performed perfectly by the simplest protoplasm. Lastly, the protoplasmic cell is a living individual, we must therefore bring the question of its possible percipience to the test of analogy. If one drop of strong hydrochloric acid be added to about twenty of water containing rhizopoda, the latter appear to shrink up, after exhibiting phenomena indicative of violent stimulation, and the pseudopodia are no longer emitted. If now to the liquid be added ammonia, equal in strength and quantity to the acid, so as to neutralise the action of the latter, the rhizopoda lose their contracted appearance and once more emit pseudopodia, although these movements are feebler than in unmixed water, thus showing that the neutral fluid is an unhealthy medium for their existence. Now, in this experiment we have a perfect example of reception of impressions. The cessation of movement is not owing to destruction of life, neither is the shrinking of the animal the mere result of chemical action, for if the experiment be repeated with dead rhizopoda, the latter do not shrink up. Of course if the strength of the fluid be sufficient in either case, a process of cauterisation ensues, and the rhizopoda disappear.

We conclude, therefore, that the protoplasmic cell is percipient, and that the tissues of the highest animals contain no new property, but simply the elaborated and concentrated qualities of simple protoplasm.

In the humblest cells, each has to digest its own food. When several unite to form a being certain of them are set apart to form the boundaries of a cavity and to fulfil the office of digestion for the benefit of the whole body; the other cells or particles do not digest. There is a cessation of function in parts, and an increase in others. In the same manner one or more of the other faculties of protoplasm is assumed by separate cells, excepting, of course, assimilation, which is the common property of tissues. As these faculties become separated the structure of the cells differentiates, special functions producing and being assumed by altered structures.

Protoplasm, then, is capable of all the vital functions without an absolute differentiation into separate tissues.

I have said that the simplest sensation is the tactile. The five senses of man are differentiated forms of touch. The difference in the sensations corresponds to the variations in the stimuli which are capable of affecting the several organs. Now "touch" is the power of appreciating contact, and such contact may be aerial or direct.

Aerial contact is effected by waves of aether. Such waves are continuous or vibratile.

Continuous waves in impinging on a sensitive apparatus give rise to the sensation of the totality of the waves, or light. Vibratile waves are due to the vibrations of material bodies, or to obstruction to the passage of currents of air. Such waves are interpreted as sound. Currents of air impinging in any vertebrate on any part of the body not set apart for the appreciation of vibrations are interpreted merely as contact—the sensation affording no indication of the origin of the waves, or the objects over or through which they may have passed. Aerial motion then conveys to the eye the idea of the presence of objects. Objects have their statical or passive quality, and their active or vibratile quality. Vibrations cannot give rise to an idea of their causes; this is the result of education. Still there is a permanent distinction between vibratile and continuous waves. Direct contact may be effected by the immediate apposition of the object itself or of its gaseous particles with the being. The former is the property of the simplest protoplasm. By inherited education the sense of touch becomes refined; the protoplasm is at length percipient of the contact of *aether*, of the continuous waves into which the vibratile are merged and lost. As the protoplasm become thus sensitive special cells—special points on the outer surface—are more percipient than the rest of the body. Acted on by the aether the molecules are forced into that position which the easier admits of the impression of the external force; hence we obtain a structural differentiation. Such alteration or modification of tissue takes the form of ocelli for the continuous and of auditory vesicles for the vibratile waves. The most refined form of direct tactile sense is the olfactory. Minute particles of the substance impinging on a sensitive apparatus give rise to sensation—which is referred to the properties of the object from whence the gaseous particles were separated.

Taste is not nearly so refined a sense as the foregoing, which, according to Valentin, can discern $\frac{3}{100,000,000}$ of a grain of musk. Nevertheless they are both examples of sensation excited by direct contact, and they are never totally separated, even in the highest vertebrates, although under ordinary circumstances the organ appropriated to each is enabled to act

independently. A differentiated apparatus for the appreciation of the qualities of an object, as odour and taste undoubtedly makes its first appearance in the form of antennae. But the only animals with antennae which in the present state of science we can with certainty declare to be media of taste and smell are the insecta. There can be no doubt that the antennae of these animals are sense media. The arguments in favour of this view rest on the following considerations. If in any insect possessing these organs they be cut off close to their bases the animal is unable to discover the neighbourhood of strongly odorous saccharine material. The animal appears capable of exercising little or no choice in the selection of its food until the antennae are renewed. If a common butterfly be watched after it has alighted on a flower, it will be seen that the animal continually points the antennae at various parts of its banqueting table; depressing them until their apices are in contact with the petals. Moreover, the antennae are raised and depressed, adducted and abducted, until an apparent satisfactory sensation is excited, when the animal follows the direction indicated by the last position of the antennae.

The latter form, indeed, the insect's exploring organs, they are far more important to its existence than an optical apparatus. It is a self-evident fact that the sense of smell among the insecta must be remarkably acute. They can detect saccharine material of whose presence man is utterly unconscious. They will be attracted by hundreds to a flower garden in the midst of a sterile country. The one organ is probably capable of transmitting the two sensations of odour and taste. The difference as inferred above rests in the method of using the antennae. When they are elevated and pointed in any direction smell is exercised; when they are depressed and opposed to any substance the sense of taste. That the insect can detect the neighbourhood of its food by the sense of smell to a greater extent than by that of sight is also sufficiently proved by the fact that they will make their way to such food even when it is placed in such a position and under such circumstances as entirely preclude the possibility of its being seen by the animal. Thus the blackbeetle will find its way to the darkened closet, mount the walls, and proceed unerringly until it has arrived at the provisions it is seeking. It is worthy of note that the butterfly is a hater of gloom and a lover of sunlight, it seldom finds its way into any dwelling.

Simple touch or contact is in man a property of the whole external integument; in certain parts, as in the palms of the hands and tips of the fingers, it is refined, and the properties of an object can be much more readily estimated by these parts

than the general surface of the body. Indeed the extremities of the digits are endowed with a sensitiveness which is differentiated from that of the rest of the integument and may be said to be the second step in the development of tactile power, which latter proceeds, as we have seen, to sight and hearing. For these reasons, it is extremely difficult to say with certainty what animals possess organs of simple touch or more definitely where the simplest differentiation of tactile function is to be found. However simple an apparatus may appear, it is yet possible for it to be the means of conveying more *complex* sensations than its analogues in the more highly differentiated animals. Certainly the pseudopodia of the actinophrys sol are organs of touch. Certainly, also, they are tolerably persistent, and entitled, therefore, to be considered structurally differentiated. Neither can there be any doubt that they form the simplest example of structural tactile differentiation. The exact estimation of the tactile power of these pseudopodia must, however, remain for obvious reasons an uncertainty. Of one thing we may however rest assured: they are not sensitive to aerial, but merely direct contact. Another fact is tolerably plain—they are not excited by such contact in the form of gaseous particles. The fact however remains that they can distinguish between edible and inedible substances. Unless this be due merely to the consistency of the latter we must suppose their pseudopodia organs of elementary taste as well as touch.

The situation of nerve organs in an animal will materially depend on its fixture or freedom. The spinal nerve organ is but the continued differentiation which is seen in the mouth &c.

The sense organ will ever be developed on those parts which are most called on for perceptive faculties in order to minister to the welfare of the being. Thus the fixed animal will not require special perceptive faculties at its base. Animals capable of swimming swiftly forwards and of turning quickly, will require only sense organs in the part of the body which lies in the direction of movement. But animals cumbrous in their form, incapable of swift motion, will require organs which shall inform them of the neighbourhood of objects in every direction around their bodies. Hence, in the ctenophora we see a mouth with round sensitive lips; at the opposite extremity a distinct sense organ of sight. On the apical side of the equator Ctenophores arise. These are not mere organs of locomotion, they are media of sense protecting the sides of the oral pole.

In considering the physiology of the invertebrate nervous system, we are brought at the outset to the question of the possible conducting power of protoplasm. Organs of sense make their appearance before nervous cords, but all analogy would

teach us that these sense organs are not themselves perceptive, in other words, that they merely transmit the impressions they receive to the body substance. Moreover, in an animal possessing ocelli, but no nervous cords, the body acts upon an idea or impression received through these sense organs. Now, the very fact that the animal has the power of controlling the movements of differentiated parts is a sufficient proof that impressions must be conveyed through definite tracts to distinct loci: in other words that conducting power is assumed by cells prior to their structural differentiation. For these reasons we may look on ocelli and kindred organs as the primary alteration of sensitive tissue or the simplest example of the alteration of structure which protoplasm undergoes to meet the requirements of perception and action.

It is not merely probable, but absolutely certain, that the nervous system does not make its first appearance as an acephalic ganglion. It would be very pretty and diagramatic to show that it did, but it does not. After the establishment of an oral aperture and ocelli, a small tract in the neighbourhood of the mouth becomes altered in structure, it is a circumscribed rounded mass, from which cords proceed to the sense and digestive organs. This occurs in the Ascidian Mollusc. *Because* this ganglion gives fibres to the sense organs, the only ones indeed that they receive, and that they are not motor organs, it follows that the ganglion must be a centre of sensation. But, taking into consideration the small number of fibres distributed generally, it is manifest that the nerves connected with this ganglion cannot be the sole conductors of sensation. In other words, the non-nervous mass of the body is sensitive. Irritation of any part of its body causes an immediate contraction of the muscular coat, resulting in the passage of a jet of water from the orifices of the body.

From the preceding considerations I am compelled to conclude, that solitary as the ganglion of the Ascidian is, the energy of the body is not centralised in it. I summarise the functions of the animal as follows:—

The organs of special sense, when present, transmit their impressions to the ganglion.

The ganglion is an elaborating, a perceptive, and a distributing organ.

The whole body is sensitive.

Sensation is more exalted in the ganglion than the remainder of the body.

It is a reflex centre for the digestive system.

The question now arises whether the ganglion is the simplest form of the cephalic?

It might be thought, perhaps, that the one part of its being directly connected with the organs of sense, sufficiently indicated the relations of the ganglion to the nervous systems of the vertebrates. But if we consider that it is the only nerve centre in the animal, that it directly governs the digestive viscera and the apparatus of motion, that the highest nervous systems have for these and other offices separate and distinct ganglia, we shall rather regard it as an undifferentiated analogue of the whole vertebrate ganglionic apparatus. Just, in fact, as the functions of the man are found in a rudimentary generalised condition in the protoplasmic cell, so the specialisation of function has, in the ascidian, marked out a nodule which is the generalised representative of the totality of man's ganglia, each of which has special functions.

Before, however, such specialisation occurs, elaboration of the sense media takes place. This occurs in the ctenophora, in whom the ctenocyst is in direct communication with a nerve ganglion. Multiplication of ganglia now sets in, and we can select no better example of this than the Actinidae. Such multiplication is accompanied by a corresponding differentiation of ganglionic functions. Some are devoted to the purposes of sight, others to controlling the muscular tissue &c. It is most important to note that throughout the Protozoa, Coelenterata, Annuloida, and acephalous Molluscs, whatever the arrangements of any nervous or sensitive systems, there is no spot, nodule, or ganglion of supreme importance over others in the animal economy. The ascidian, I have said, possesses the simplest nervous apparatus, but with the increase in the number of ganglia which occurs in many animals belonging to the above divisions there is no persistent maintenance of a single ganglion connected with organs of sense. Were it so we could only arrive at one conclusion—that a cephalic ganglion was the first nervous organ to make its appearance; that non-cephalic ganglia were gradually produced, and that the cephalic ganglion was the sole seat of sensation. But the anatomy of the Actinidae, their scattered ocelli, ganglion, and fibres, bear incontrovertible testimony to the diffusion of vitality in their bodies.

The first appearance of a cephalic mass has not hitherto been detected in the form of a separate and distinct ganglion. In the Echinoidea we see, perhaps, the simplest homologue of the vertebrate—encephalon, in the form of a ganglionated cord surrounding the gullet and sending off five branches. The nervous system is adapted to the general structure of the animal, that is, it being desirable to obtain the greatest amount of nervous power with the least occupation of space the ganglionic cord *surrounds* the oesophagus, which is short. In this manner

also, the ganglia are the more readily enabled to supply the ambulacral spaces. If we now suppose one of the ganglia to retain its position on one side of the oesophagus, and the remainder of the cord to be placed on the other side of the digestive tube, but continuous and in a line with the solitary ganglion, we shall have a diagrammatic representation of the higher invertebrate nervous system, and shall understand how a ganglionated circle surrounding the oral extremity of a digestive tube, has one of its ganglia the homologue of the vertebrate brain.

But not the analogue. Neither in the echinoidea nor in the more highly differentiated nervous apparatus of the acephalous molluscs do we see anything approaching in function to a cephalic ganglion.

The nervous system of the annulosa consists of the double chain of ganglia already described. The greater number of the ganglia are post-oesophageal and represent the sympathetic of the higher animals; the pre-oesophageal ganglion being situated on the superior surface of the digestive tube is the direct homologue of the vertebrate brain. The insecta, which are, as I have said, the most important members of this order, exhibit the same type of nervous structure as its simplest forms; they, however, besides the increase of the thoracic and the decrease of the abdominal in size, exhibit the most rudimentary form of a cerebro-spinal axis. There is a prolongation of the substance of the cephalic ganglion backwards in the form of two cords above and in contact with the non-cephalic ganglia. Functionally these spinal fibres unite the ganglia and fibres into a composite machine capable of obeying the dictates of any one ganglion, but more especially of the cephalic. If such annulose animals as the garden worm, in whom there are no spinal fibres, be cut into several pieces, each portion will preserve the power of movement for hours, provided each segment have a perfect ganglion: we may cut the animal into as many pieces as we choose, and each portion will preserve the power of movement. If we now take an insect, such as the house fly, decapitate it, the animal will be able to perform to a limited extent the action synonymous with its name: it will walk, if placed on its back, will regain its footing, and perform other actions presently to be considered. Now cut the body into two segments, and what is the result? The animal lies motionless and dead. The conclusion is obvious: in the worm the separate pairs of ganglia form an independent vital apparatus; in the insect they are no longer independent but through the spinal fibres—inter-dependent. Whereas the worm is *multiple* in its points of energy, the insect is *dual*, i.e., it possesses cephalic and non-cephalic

apparatus, the non-cephalic having several distinct loci, stimulation of any one calling for the action of the whole non-cephalic apparatus.

The cephalic is the most important ganglion of the worm, the whole body is capable of obeying it, *but through* the non-cephalic ganglia. The impulse proceeds backwards from ganglion to ganglion, and this is exemplified by the animal's mode of progression. The worm moves by approximating the second segment to the first and the third to the second, and so on: a gradual wrinkling, shortening and lateral enlargement of the anterior portion of the body is seen, the wrinkling and approximation proceed in a rhythmical order from before backwards.

The approximation being complete, extension takes place in the same order. Now, in such a high vertebrate as the serpent, which, however, as it moves by undulatory motion may be compared for one moment with the foregoing, there is no such approximation from before backwards. Without necessarily moving its head or fore part, the snake arches its posterior extremity and an undulatory progressive motion proceeds from behind forwards. The posterior extremity of the body acts immediately in obedience to the anterior, and not by successive transmission of the impulse from ganglion to ganglion.

But to revert to the insecta. It is owing to the very interdependence of their parts—to the oneness in life of non-cephalic ganglia that section abolishes such oneness and cessation of action ensues. But were the nervous system not a dual—were it an unit—had the spinal fibres commanded the ganglia only in obedience to the cephalic ganglion, then on severance of such ganglion all action would cease, *but it does not*. It is not a question of the action of individual parts, but the whole body walks, flies, and the limbs move in their regular order. The animal acts as a being without a cephalic ganglion.

Let us consider that reflex action takes place in obedience to a stimulus at the periphery of a sensory nerve. When a decapitated insect is on its back, what stimulus affects the extremities of the legs to make it regain its feet? Normally the ganglia which are connected with the limbs are under the control of volitional centres; the animal, if walking, stops when it pleases, so it does when decapitated; *ergo* there must be a volitional centre.

In the highest vertebrates bodily actions may be divided into reflex and non-reflex. This, then, is the highest differentiation of efferent action. Reflex movements may take place through the brain, spinal cord, and sympathetic system. They govern the visceral functions, and are concerned in many so-

called voluntary actions of our daily life. So greatly is this the case that the physiologist is apt to consider the reflex power a property of the non-cephalic centres, which enables them to act independently of the brain. How thoroughly erroneous this opinion is the execution of criminals by the axe has sufficiently proved. Death almost immediately follows such decapitation, and no bodily reflex or other actions ensue. The conclusion is, that these centres are directly dependent on the encephalon for the maintenance of their energy. But if the domestic fowl be suddenly beheaded it will often walk or run several paces, and always manifests a greater amount of energy than the decapitated man.

Here the conclusion is that the non-encephalic centres are more independent of the cephalic than in man.

If the frog be subjected to the same experiment it will not merely live for several hours but will strive to push away any instrument with which it is touched.

In this case also the same law is pursued. In the insecta the same phenomena are exhibited, but intensified.

The same may be said of the worm.

If we now pass through the series, from below upwards—worm, insect, frog, fowl, man—we see more plainly *how the cephalic ganglion* is gradually increased in motor and sensory power, and the non-cephalic ganglion correlatively lessened.

The nervous system follows the law of specialisation.

The ganglia of the Echinoidea are reflex, and sensitive and motor, without predominance of any one ganglion.

In the worm all the ganglia possess these qualities, but the cephalic ganglion to a greater extent than the remainder.

In the Insecta the non-cephalic ganglia are combined by a continuous cord into one sensitive and motor apparatus; the individual *ganglia* are reflex. The cephalic is sensitive, motor, and reflex, and possesses the first two properties to a greater extent than any other part of the body.

The same may be said of the frog, fowl, and man. There is thus a gradual separation of parts for the more perfect performance of distinct functions, which, in the lower forms, are combined in a rudimentary condition, and are effected by undifferentiated ganglia.

In the spinal cord of the insect we see a distinct addition to the nervous system of the lowest annulose animals.

Now the cords can only be added for:—

- 1st.—Transmission of commands from cephalic to non-cephalic centres, or
- 2nd.—Transmission of sensation to cephalic ganglion, or
- 3rd.—Differentiation of the ganglionic powers of the simplest annulosa.

With regard to the first hypothesis:—

Conducting organs cannot be *added* to a ganglionic mass without special additions to that mass, for an increased conducting apparatus can exist only when there is an increased generating apparatus.

With regard to the second hypothesis, the same may be said, substituting, however, the word 'sensitive' for 'generating.'

The cords then form the physical centre of a differentiation of ganglionic powers. Is such differentiation motor or sensory or reflex? To answer this we must solve another problem—Does the seat of volition correspond to that of sensation until they become differentiated?

In man the encephalon consists of the cerebral hemispheres, the sensory ganglia, the cerebellum, pons, crura, and medulla.

The highest mental acts are Volition and Ideation.

Pathology has proved that these faculties have their seat in the cerebrum.

In the frog ideation and memory are situated in the cerebrum, but not volition entirely. Volition in this animal occupies the whole spinal axis, increasing from below upwards. So that it follows the course of sensation.

It is only in the highest vertebrates that we find ganglia differentiated into sensory and volitional. We therefore conclude that among the humbler forms the sensory are volitional.

This leaves us reflex action—the ganglia are the seat of this.

Therefore the spinal cord of the insect is to be regarded as a centre of common sensation; it acts by itself without the brain. Moreover, it acts as a whole; section destroys its irritability, and occasions almost immediate death.

The mammalia, aves, reptilia, and pisces occupy this order with reference to their brain development, and also to their intelligence.

The average sizes of their nerve fibres are as follows:—

Mammalia	.	.	.	$\frac{1}{1625}$	to	$\frac{1}{6500}$	of an inch in diameter.
Aves	.	.	.	$\frac{1}{2000}$	"	$\frac{1}{3000}$	" "
Reptilia (Frog)	.	.	.	$\frac{1}{1260}$	"	$\frac{1}{2280}$	" "
Pisces (Eel)	.	.	.	.	.	$\frac{1}{1643}$	" "

The nerve fibres in man are smallest in the brain and spinal cord, in which they measure from $\frac{1}{100000}$ th to $\frac{1}{14000}$ th in. in diameter; in the trunks and branches of the nerves they measure from $\frac{1}{2000}$ th to $\frac{1}{3000}$ th in.; so that the fineness of the nerve fibre in man is correlated to the altitude of its functions.

The difference between the nervous power of man and of the inferior animal, and the corresponding difference in the size of the fibres shows that there is a general correlation of nerve power to the fineness of the fibres.

The relative difference in size between the fibres of the nerve branches and those of the cephalic ganglion, and between those of the latter organ and of the spinal cord, decreases as we pass downwards among the members of the animal kingdom.

Among invertebrate animals the fibres are relatively fewer in number and coarser than in the vertebrates. The fibres of the cephalic ganglion, where present, are finer than those of the nerve branches. The fibres are finer absolutely in the higher than in the lower invertebrata. We can, therefore, judge of the relative powers of parts of any animal's nervous system by comparing the size of their fibres.

The general law of whose principles I have been speaking may be thus formulated.

There is throughout the members of the animal kingdom possessing a nervous system a gradual differentiation of nervous cords to separate fibres. The differentiation is both absolute and relative. Absolute as regards the relation of the fibres of an animal to those of a member of a higher or lower order; relative as regards the cephalic and non-cephalic fibres of any one animal. The differentiation is greater in the former than in the latter case.

Throughout the cold-blooded vertebrates the proportion of the nerve centres to the nerve is much less than in the warm-blooded animals; there is thus a direct proportion between the nerve totals or systems and nerve fibres.

Evolution or development then proceeds from generally sensitive and homogeneous protoplasm to more sensitive spots, which spots are concerned in the appreciation of special qualities of external objects; these become elaborated into organs of distinct special sense—ocelli and auditory vesicles.

Tracts of cells communicating with these sense organs are enabled to conduct impressions and impulses through the body substance, without an apparent structural differentiation of such cells.

The latter condition, however, shortly obtains when we see one or more ganglia sending fibres to the various body organs.

Multiplication of ganglia now occurs without the supremacy of any one ganglion.

The next step is the establishment of the latter condition.

The further development is from the cephalic ganglion, which sends backwards two communicating cords.

Elaboration of the cerebro-spinal axis now proceeds.

The qualities of the tissues of the highest vertebrates are the differentiated properties of the simple protoplasmic cell.

To know the power of a being we have only to estimate the individual functions of its differentiated parts—if any.

Where there is one ganglion it must be the seat of the animal's highest powers.

Where there are ganglia in connection with sense organs, and others in connection with muscular fibres &c., we have ganglia of special sense (sight and hearing) and *others*.

The *others* must then represent the remaining powers of protoplasm—immediate tactility—motor and reflex action.

Thus far then, there is only a differentiation of special sense.

With the prolongation backwards of the cephalic ganglion the non-cephalic ganglia yield their properties of common tactility and volition to such process, retaining their power of reflex action. This is the second nervous differentiation.

Such a cerebro-spinal axes makes its first appearance in the insecta.

From this point the differentiation of nerve faculties is absolute and in kind in so far as the cephalic ganglion is concerned.

This becomes elaborated into separate ganglia having distinct functions. But the spinal cord merely differentiates in degree; it receives the power of reflex action, this increases with the multiplication of the sympathetic ganglia; at the same time it loses by degrees its faculties of common sensation and volition, which become centralised in the cephalic ganglion. But with such centralisation there is a dependence of the cord on the cephalic ganglion for the maintenance of its powers.

Hence it follows that separation of such ganglion by severance from the cord increases the functional activity of the latter, the extent of such impairment of energy being exactly correlated to the cephalic assumption of the erst general nerve properties.

If we represent the spinal power of the insecta by 100, and its cephalic by 150, and supposing the frog lose three-fifths of its energy when decapitated, we may roughly demonstrate the change as follows:—

Insects' normal spinal powers	:	:	:	:	:	:	:	100
„ cephalic „	:	:	:	:	:	:	:	150
								<hr/>
Total cerebro-spinal power	.	.	.	.	.	.	.	250
Insects' spinal powers . $100 - \frac{3}{5}$ (frog's loss) = $60 - 100 = 40$, frog's spinal power.								
Frogs' cephalic ganglion = 150 (normal in insecta) + 60 (gain in frog)								
= 210, normal in frog.								

Examples of such increasing centralisation have been given.

The action of the body in the lowest animals is effected by simple continuity of its composite particles without reference to linear transmission, or any other, save the diffused and uniform. In the higher animals such action is effected by the

continuity and differentiation of certain lines of cells and subservience of the rest of the body to these.

The centralisation of energy is always regional at first? that is, it occupies a tract of the body substance, it is not intercellular, but, on the contrary, involves many cells. It becomes intercellular by development.

The greater importance of the cephalic ganglion than the remainder of the ganglion, is always proved when decapitation impairs energy.

That it is not the sole seat of energy is always proved when after such decapitation energy is preserved.

The development of the nervous system is in two directions: first, towards the erection of a large complex cephalic ganglion and spinal cord, and, secondly, the extension into the tissues of ramifications from the nervous trunks.

Lastly, the fineness of the nerve fibres is correlated to the altitude of the functions of the nerve organ in which they are situate, and to the place and intelligence of the being in the animal world.

The following is a classification of the chief points of centralisation of energy:—

Protoplasm. . . . Homogeneous in simplest form.
Monera Ectoplasm and Endoplasm.

Lowest Annulose $\left\{ \begin{array}{l} \text{Cephalic ganglion} - \left\{ \begin{array}{l} \text{Special sense} \\ \text{Ideation} \\ \text{Memory} \end{array} \right\} + \left\{ \begin{array}{l} \text{Reflex action} \\ \text{Common sensation} \\ \text{Volition.} \end{array} \right\} \\ \text{Non-cephalic ganglion} - \left\{ \begin{array}{l} \text{Reflex action} \\ \text{Common sensation} \\ \text{Volition.} \end{array} \right\} \end{array} \right.$

INSECT.

Cephalic ganglion . $\left\{ \begin{array}{l} \text{Special sense} \\ \text{Common sensation} \\ \text{Ideation} \\ \text{Memory} \\ \text{Volition.} \end{array} \right.$
Spinal cord . . . $\left\{ \begin{array}{l} \text{Common sensation} \\ \text{Volition} \end{array} \right\} \left\{ \begin{array}{l} \text{Ganglia} \\ \text{Non-cephalic} \end{array} \right\} - \text{Reflex action.}$

FROG.

Cephalic ganglion . $\left\{ \begin{array}{l} \text{Special sense} \\ \text{Common sensation} \\ \text{Ideation} \\ \text{Memory} \\ \text{Volition} \\ \text{Reflex action.} \end{array} \right.$
Spinal cord . . . $\left\{ \begin{array}{l} \text{Volition} \\ \text{Common sensation} \\ \text{Reflex action.} \end{array} \right.$
Non-cephalic ganglia . Reflex action.

	Cock.	
		{ Special senso
		{ Ideation
		{ Memory
Cephalic ganglion	.	{ Volition
		{ Common sensation
		{ Reflex action.
Cord . . . . .	.	{ Upper part: Volitional, and seat of common sensation.
		{ Lower part: Reflex action.

Such are the facts and phenomena I offer to the consideration of physiologists, and from which I derive the following conclusions:—

There is throughout the animal kingdom a gradually increasing centralisation of energy in certain loci of the body. Such centralisation is accompanied by structural differentiation of tissue. With the former and latter condition there proceeds a differentiation of originally combined protoplasmic faculties into distinct and elaborated functions.

Percipience and volition are the properties of the simplest protoplasm; they first find a differentiated locus in one or more ganglia. They are then elaborated to a greater extent in one ganglion—the cephalic. Such cephalic ganglion sending back a process, forms with this latter a cerebro-spinal axis; this axis now assumes the totality of certain properties lately common to the ganglia. The axis gradually centralises these faculties in its anterior extremity and cephalic ganglion. With this centralisation the reflex function of the non-cephalic ganglia extends into the cord, and a coincidental structural elaboration of the whole nervous system occurs. Percipience and volition therefore are throughout the invertebrata and lower vertebrata not confined to the cephalic ganglion or brain.

ART. IV.—PSYCHOLOGICAL ASPECT OF THE LAROS CASE,
ON THE TRIAL OF ALLEN C. LAROS, AT EASTON,
PENNSYLVANIA. U.S.A., FOR THE MURDER OF HIS
FATHER, MARTIN LAROS, BY POISON, THE DE-
FENCE BEING BASED UPON THE ALLEGATION OF
EPILEPTIC INSANITY.

By Dr. EDWARD C. MANN, Superintendent Sunnyside Medical Retreat for Mental and
Nervous Diseases, Fort Washington, New York City,

THE history of this very interesting case is as follows, and was obtained from my distinguished friend, Henry W. Scott, Esq., of the Pennsylvania Bar, to whom I am indebted for the material for this paper:—

The Laros family lived at Mineral Spring, situated on the Delaware River, in Northampton County, four miles above Easton, Pa. The little hamlet consists of a tavern, and the homes of seven or eight families, near together, along the river road. Martin Laros, the father of the family, was fifty-seven years old, and his wife was fifty-one. They had lived at Mineral Spring for thirty years. He taught school during the winter months, worked his farm in the summer, and at the same time was employed as undertaker and cabinet-maker. He was quiet, unobtrusive, and respected in his neighbourhood. Mrs. Laros was a woman of domestic habits and lively temperament. They have had seventeen children, thirteen of whom are now living. Several of them have been school teachers. Some are living in the neighbourhood, and others have removed to a distance. At the time of the poisoning, the family consisted of the father and mother, Allen (the prisoner), Erwin, Alvin, Clara, Alice, and a very young grandchild. Moses Schug, also a member of the household, was a bachelor, sixty-two years of age. He assisted Martin Laros on the farm and in the shop. One evening, while the family were at the supper-table, they were one by one taken violently ill. Neighbours came in to do what they could for the sick, and physicians were summoned. Allen also assisted in caring for the sick; he was taken ill later in the evening. Mrs. Laros died at seven o'clock the next morning. Mr. Laros also died on the same day about noon, and Moses Schug at three o'clock on the following afternoon. The other members of the family recovered in about a week. The fatal supper was partaken of on Wednesday. The coroner's inquest was begun on Thursday afternoon, and on Saturday the following verdict was

rendered: "That the said Martin Laros, Mary Ann Laros, and Moses Schug came to their deaths from the effects of arsenic poison, administered in coffee on Wednesday evening, May 31, 1876, and that we believe the same was administered by Allen C. Laros." A warrant was issued at once, young Laros was arrested as he lay sick in his bed, and taken to the county prison at Easton, Pennsylvania. The prisoner was about 26 years of age, a little under the medium height, and slightly built. He had received an ordinary common school education, and was fairly intelligent. He was temperate, industrious, and moral, and was a church member. He was always disposed to be somewhat reticent, and spent much of his time alone. He was of respectable parentage, of healthful surroundings, of good moral and intellectual training, a teacher of the young in one of the public schools in his own township. He was, however, an epileptic, the epilepsy having first manifested itself more than four years before the poisoning took place, and had continued by successive steps of longer or shorter duration until the time of the poisoning. For three weeks before this time almost daily he was so afflicted with epileptic convulsions as—so counsel for defence claimed—to dethrone his reason, and destroy the powers of his mind. It was claimed and proved that on the Saturday previous to the crime he was afflicted with convulsions; that he had them on Sunday, on Monday, Tuesday (the day the commonwealth claimed he bought the poison), on Wednesday—the day of the poisoning—and on Thursday and Friday, immediately after it. After his confinement in prison he was similarly affected by these convulsions, varying in duration from a few minutes to several hours. During the continuance of the convulsions he was totally unconscious. Before and since his confinement, for a period of several hours after these convulsions had passed away, his mind was clouded and confused, and his conversation and acts not responsible. My own opinion has always been, that in the event of a criminal act by an epileptic, we should suspect mental disorder, and, that in the absence of any strong personal motive, there should be immunity of punishment to epileptics for acts committed within three days before or after an attack, such insane acts being to me the evidence of an insane mind. Such persons are, I think, able to conduct their business and perform their duties and continue their pursuits in all respects like other people, except at the time of seizure.

In the case of young Laros there was an inherited tendency to insanity and nervous diseases for several generations, and in many branches of the family of the prisoner—grandfather, grandmother, and maternal aunt—these circumstances all con-

tributed to lower the grade of his offence, even if it was not the offspring of decided insanity. While young Laros was in prison awaiting trial, every possible experiment was tried to ascertain if he were conscious while in the convulsions, and every conceivable test applied to see if the prisoner were feigning. The prison physician, during the first paroxysm he witnessed, suddenly thrust the blade of a sharp knife into the prisoner's hand, and no sensation was manifested. A heated key was next applied. Then the flame of a lighted lamp was held to the sole of his bare foot, and still not a quiver of sensation followed. Melted sealing-wax was dropped upon the bare skin, so that the sealing-wax burned into the skin, and no indication of pain was shown. Nothing that science could suggest was left untried to detect imposture, if any existed, but all these tests failed to detect any feigning on the part of the prisoner.

At the trial, Dr. John M. Junkin, of Easton, Pa., testified that he was called upon to visit Martin Laros on the morning of June 1. Reached there about three o'clock, and concluding from the symptoms that they were all suffering from arsenical poison, gave stimulants and hydrated peroxide of iron. He found his patients vomiting and purging, and gave it as his opinion that the death of Martin Laros was caused by arsenic.

During the progress of the trial various persons testified to having been aware of the prisoner's infirmity, and the deputy-warden of the county prison testified as to the nature of the attacks while Laros was in prison; he described finding the prisoner "struggling in his cell in a fit, with his face very white, eyes partly closed, the hands clenched with the thumbs inside," and that he heard the prisoner's teeth gritting. He also described incoherent and apparently insane conversation of the prisoner, and hallucinations of sight. The prison physician also testified that he found him with a weak and feeble pulse, and cool, pale skin, acting in a wild incoherent manner, talking about fishing, seeing water snakes, and other nonsensical insane conversation. Any bright object he would endeavour to get hold of. His pockets were stuffed with bits of paper and such things. He tried to get the warden's shoe buckles, and the bright tips of the Doctor's shoe strings. The Doctor also testified that he--the prisoner--did not appear to have good control over his muscular movements. The Doctor also described various epileptic convulsions which he witnessed, and testified as to the total unconsciousness of the prisoner during the paroxysms. He also testified to seeing the prisoner six to eight hours before an attack, when he appeared dull and gave imperfect answers, and complained of pain in the head. The prisoner's condition while

under observation, coupled with the testimony of his friends as to his previous symptoms and condition, led all unprejudiced observers to believe that he was mentally unsound. Dr. John Curwen, the Superintendent of the Pennsylvania State Lunatic Asylum, testified that he considered frothing, swelled veins in the neck, and lividity of face as essential symptoms, and without these he would doubt the genuineness of the epilepsy; although on re-examination by counsel for defence he admitted that these signs might possibly be absent in cases even of pure epilepsy. Dr. Curwen was expert for the commonwealth of Pennsylvania.

The jury in this case rendered a verdict of murder in the first degree, and the prisoner was duly sentenced to be hung. The death warrant was signed, but a writ of error was sued out in the Supreme Court of Pennsylvania, which operated as a *supersedeas*, and the Governor recalled the warrant.

The counsel for the defence then presented to the court a petition, alleging mental unsoundness, and asked for a commission to inquire into the matter and ascertain whether the prisoner was a proper subject for capital punishment. The commission appointed by the court consisted of Dr. William Pepper, of Philadelphia, Dr. T. Preston Jones, also of that city, associated with Dr. Kirkbride, at his asylum, and Hon. A. Rose, a lawyer of Pennsylvania. The commission spent a month or more in taking testimony and making personal examination of the prisoner. They made a *unanimous* report to the court that he was an epileptic, and mentally irresponsible; that he should not be visited with capital punishment, and recommended his removal to an asylum. Thereupon the court ordered him to be removed to the State Lunatic Asylum at Harrisburgh, Pennsylvania, of which Dr. Curwen was, and is, superintendent. After confinement for a period of about two years he escaped, and subsequently was captured in Arkansas, or rather he surrendered himself to the authorities, and requested them to send him back to "this country to be hung." He didn't want to be returned to the asylum. He was returned to the asylum, and about six months ago he escaped from there the second time, and nothing is now known of his whereabouts, nor has any effort been made to find him. The able efforts in his behalf, and in the cause of humanity, are owing to the exertions of his counsel, Henry W. Scott, Esq., of Easton, Pennsylvania, who is one of the most talented and brilliant lawyers in the State of Pennsylvania. Upon his examination the prisoner declared that his father and mother were both living, and that his father was making a door when he left home. One of the prisoner's brothers was up to the time of

his death a quiet, uncommunicative, and retiring man, and he died by hanging himself, without apparent motive or cause. Young Laros was a person of uniformly mild and tractable disposition, who was brought up amid the softening and restraining influences of a pious and affectionate family, and away from demoralising surroundings or vicious companions. This outrageous and enormous crime was very evidently the outcome of mental disorder, which had depraved and eclipsed the moral faculties. Yet the judge and jury deliberately arrived at a verdict which doomed this unhappy creature to the scaffold, and cast an indelible blot on justice by the readiness with which the popular demand for conviction was complied with.

In reviewing this case psychologically we have, as I have said, a mild-mannered boy of previous exemplary behaviour, uniformly kind and affectionate, suddenly developed into an inhuman monster of depravity. For four years he had been afflicted with epilepsy, and we must bear in mind the tendency of epilepsy to generate the insane impulse to crime. We must also bear in mind that there are on record many homicides committed by epileptically insane persons under every circumstance of apparent motive and design. There was a rapid succession of the spasms shortly before and after the Wednesday night on which the family were taken sick. These attacks had been noticed, more particularly during the few months preceding the tragedy, and they had occurred with startling distinctness and frequency; and on the very evening of the murder he was unquestionably under the influence which precedes and follows the epileptic paroxysm in epileptic insanity. The experts for the commonwealth in this case adopted the typical case of epilepsy as the unvarying standard by which the disease is to be ascertained, and it was only under the most rigid cross-examination that they would modify, in some degree, this position.

The symptoms of epilepsy, however, I contend, are not invariable. There may be every variety, from the simply vertiginous to the most demonstrative muscular and nervous spasms. The epileptic may be pallid or purple-hued; the pupils may contract or dilate; the fingers may be clenched or extended; there may be foaming at the mouth or it may be absent; that some of the symptoms of the most decided and impressive type are not present, is no proof that the disease is not epilepsy. The disorder of the intellect which accompanies epilepsy is similar to that we meet with in chronic insanity, and while, of course, it is not the invariable rule, yet in my own practice, I have, in the great majority of cases, observed enfeeblement of

the memory and intellectual powers amounting to insanity in many instances. While an epileptic may be very intelligent, I do not believe that either during the attack or for an indefinite period subsequently, the mental faculties are under the control of the patient. The patient, particularly as the effect of the lighter seizures, becomes very irritable indeed, and there are instinctive impulses, I think, to acts of violence. This state often ceases upon the completion of the act of violence. The confused recollection of what has happened and the unconsciousness of the gravity of their acts is, I think, diagnostic of the mental state of the epileptic, and should be considered as the essential characteristic of it. The epileptic, in the majority of cases, seems to automatically obey the impulses generated by his disease, and seems utterly powerless to resist them, even though they are impelled to criminal deeds. This constant disturbance of the affective and intellectual faculties which is manifest after the paroxysm may last during the greater part of the interval between the fits, and this is a medico-legal point of great importance which should be perfectly understood by the judiciary. There may be abortive epileptiform attacks where there are no convulsions and where there is no complete loss of consciousness, a sort of epileptic vertigo, and yet such persons have committed sudden deeds of violence, and were utterly unable to remember the circumstance afterwards.

Young Laros had an attack on the Saturday preceding the tragedy and also on the following Monday night and Tuesday night, and on Wednesday morning the family observed the same staggering walk and the confused manner which he always exhibited after the nocturnal attacks. On the Thursday morning following and on Friday he had repeated attacks of renewed power and frequency.

ART. V.—LUNACY IN ENGLAND.

THE twenty-fourth report of the Commissioners in Lunacy has just been issued.

The following table shows the classification of the patients on the 1st of January :—

Where maintained on January 1, 1880	Private			Pauper			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
In county and borough asylums	211	273	484	17,903	21,701	39,604	18,114	21,974	40,088
In registered hospitals . . .	1,409	1,293	2,702	81	48	129	1,490	1,341	2,831
In licensed houses :									
Metropolitan	1,026	828	1,854	180	428	608	1,206	1,256	2,462
Provincial	745	809	1,554	247	286	533	992	1,095	2,087
In naval and military hospitals and Royal India Asylum . .	309	19	328	..	..	..	309	19	328
In Criminal Lunatic Asylum (Broadmoor)	180	50	230	188	65	253	368	115	483
In workhouses :									
Ordinary workhouses . . . .	..	..	..	5,126	6,865	11,991	5,126	6,865	11,991
Metropolitan district asylums	..	..	..	2,080	2,393	4,473	2,080	2,393	4,473
Private single patients . . .	186	282	468	..	..	..	186	282	468
Outdoor paupers . . . . .	..	..	..	2,293	3,687	5,980	2,293	3,687	5,980
Total	4,066	3,554	7,620	28,098	35,473	63,571	32,164	39,027	71,191

From the above we see that there is a decrease of 121 males and 37 females of the private class, and an increase of 602 males and 862 females of the pauper.

The private patients have increased in County and Borough Asylums by 8, but have decreased in all other establishments.

The pauper patients have increased in County and Borough Asylums by 1,209, in Registered Hospitals by 12, in Licensed Houses by 31, in Workhouses by 294, in the Metropolitan Asylums of Leavesden, Caterham, and Darenth by 165. The "*out-door paupers*," residing with relatives or others, have decreased by 250.

The usual important statistical tables are given, showing the progress and condition of lunacy in its various grades, throughout the year.

With regard to the causes of insanity, intemperance again heads the list. This *curse* of our age ought to be legislated for. The Habitual Drunkards' Act is worse than useless. What we want is a compulsory Act, not a voluntary one.

At the present time there are sixty County and Borough Asylums in England and Wales.

On the 1st of January, 1879, there were 38,870 (17,678 males, and 21,192 females), the total admissions during the year being 11,758, of which number, 5,693 were males and 6,065 females.

Those discharged during the year number 6,249, whilst the deaths were 4,291. The average daily number resident in the County and Borough Asylums throughout the year 1879 was 39,642.

During the year two of these institutions have been visited by outbreaks of typhoid fever, in consequence of the bad drainage. This occurred at the County Asylums of Chester and Somerset; in the former the chaplain, his wife, and four of the patients succumbed to the malady, whilst in the other, a large number were attacked, but only two died.

The following suicides happened during the year:—

“No suicide or other fatal casualty has been reported to us as occurring in any Borough Asylum during 1879, and we are glad to state that those which have happened in the County Asylums have been, during the same period, comparatively few. We hope that this greater immunity from such accidents may properly be attributed, in some degree at least, to the prevalence of better arrangements for the supervision of insane patients and the exercise of greater vigilance on the part of those intrusted with their care.

“We proceed to note (shortly) the circumstances of the cases of this description which have occurred in the year in the County Asylums, or to patients absent on trial but still on the books.

“A female patient, of the Three Counties Asylum, hanged herself, while absent on trial, on the 28th of June. This would probably have been avoided had the patient been returned to the Asylum in accordance with the suggestion of the Asylum authorities, conveyed to the clerk to the guardians of the union to which the patient belonged, by a letter of the 23rd of June. It seems, however, that the parents of the patient were very unwilling that she should be detained in an asylum, and this possibly prevented the immediate action that was necessary in the case.

“A married woman, S. J., was admitted into the Berks County Asylum on the 29th of October, 1877, on a certificate

which stated that she was desponding, and had a delusion that she and her family must come to utter ruin and destitution. The "statement" sent to our office by the medical superintendent mentioned, too, that she had "suicidal feelings and delusions." In the evening of Sunday, the 12th of January, 1879, she evaded the attendant, gained access to the dormitory in which she slept, and there hanged herself to one of the gas pendants by means of a round towel, which it was supposed she must have taken from the basket for dirty linen. It is stated that S. J. had escaped the nurse's notice while the patients were being taken down to the hall for tea, and that she had been able to get into the dormitory, owing to the door of the latter being inadvertently left unlocked, and that the patient had not been "looked upon as a suicidal case," her husband having said on her admission that she had never threatened or attempted suicide. With reference to this point we failed to understand how such a view could be entertained in the face of the certificate, and of the medical superintendent's own "statement." We were afterwards informed that the lock had been made more secure, but that there were difficulties in the way of altering the gas pendants.

"At the Parkside (Macclesfield) Asylum, a female patient, H. C., committed suicide on the 21st of April, only five days after admission, by throwing herself from a second-floor window.

"She was of known suicidal propensity, and was so described in the 'reception sheet' given to the charge attendant of the ward in which she was placed. Apparently improving, the patient was, on the day of the suicide, directed by the head attendant to be employed in the laundry. This order was forgotten by the charge nurse, who, instead, sent H. C. to assist an under nurse in making beds in a second-floor dormitory. Before this work was completed, the under nurse took H. C. into her bed-room, which adjoined the dormitory, and the windows of which were widely opened. Her object was to give the patient some confectionery as a reward. This done, both left the bed-room together and returned to the dormitory, but the nurse omitted to lock her bed-room door after her. She committed a second fault in leaving H. C. in the dormitory, with only one other patient, while she went to inspect a different dormitory. H. C. took advantage of the nurse's absence to return to the bed-room, and finding on the table some poisonous liniment, she drank it and then threw herself from the window. Death ensued in a few hours from the injuries caused by the fall.

"The carelessness and infraction of rules manifested in this case were the subject of comment by us, but we left the ques

tion of punishment to the Committee, who, in consideration of previous good character, forbore to dismiss the nurse who was chiefly in fault.

"M. R., a woman suffering from melancholia, and stated to be suicidal, was admitted into the Cornwall Asylum on the 5th September, 1878. After a slight improvement she relapsed, and on 27th September tried to throw herself over the banisters. She again improved, though with some relapses, but continued apparently well from December to the 1st of March, 1879, when, after examination by the medical superintendent, she was allowed to go on trial for five weeks to the care of her husband and children at Camborne, and with a weekly allowance of 5s. On the 5th of March, when returning to her home with her son, she left him and went into some neighbouring arsenic works, and drank from a pool containing arsenic in solution, from the effects of which she died the same evening.

"This case affords an instance of the difficulty, so constantly experienced, of determining how soon to rely on the apparent convalescence of a patient with suicidal tendency.

"An epileptic idiot cripple, S. T., died in the same Asylum on the 12th July, 1879, and the verdict of the coroner's jury who inquired into the case was, that 'the said S. T. died from epilepsy, and that his death was accelerated by exhaustion the result of a scald.'

"It appeared in evidence that an attendant, with the aid of a patient, had, on the morning of the 2nd July, taken S. T. to the bath-room to give him a bath; that the attendant had turned on the hot and cold water *together*, and while the bath was filling had left the bath-room to attend to another patient outside; that during his absence the patient left in charge of S. T. had placed the latter in the bath; that the attendant hearing a sound as if some one had been put in the water, rushed back, saw S. T. in the bath, and moaning, and on taking him out found him scalded.

"After reading and considering the bathing rules in force in the Asylum we did not think that so much blame attached to the attendant for this accident as would have been commonly attributable; for the rules did not contain instructions on three important heads, namely that the cold water should always be turned on first; that during the employment of the bath the room should never be left without an attendant: and that the keys should not be allowed to remain on the water-taps, and when out of use should be kept locked up.

"A female patient who, after some six months' residence in the Cumberland and Westmoreland Asylum, had sufficiently re-

covered to be sent out on a month's trial, destroyed herself at her home. There appears to have been no reason in her case to suspect a suicidal disposition, and no ground for supposing that her discharge on trial was premature.

"On the 9th of April a patient in the Derby Asylum, J. D., committed suicide by cutting his throat with a piece of glass, obtained by breaking the glass of a framed Scripture text. He was known to be suicidally disposed, and when admitted, on the 7th of January, 1879, was placed under special care, and orders were, we are informed, given by the medical superintendent to the chief attendant, and by the latter to the ward attendant, that J. D. was to be constantly watched. He, however, about 8.45 on the morning of the 9th of April, while engaged in dusting the furniture in the gallery, escaped the observation of the attendant in charge, who was occupied at the end of the gallery in shaving another patient, and entering a small dormitory, the door of which into the gallery had been left open, soon after was found kneeling by a bed with a severe wound in the neck, self-inflicted by the piece of glass obtained as before mentioned. He died in about half-an-hour after being so found. The reason given why the door of the dormitory was left open, was that the room was being aired, ventilation by the windows alone not being satisfactory. Although the circumstances of this case evidently pointed to a relaxation by the attendant in charge of that unceasing watchfulness which is requisite in the case of patients of the suicidal class, we did not consider the neglect so culpable as to call for further action on our part.

"On the 23rd of October, E. K., a private patient of the Dorset Asylum, while residing with his brother, to whose care, on trial, he had been allowed to go on the 10th of the same month, committed suicide by cutting his throat with a razor. This patient, who was distinctly suicidal when admitted, had been several months in the Asylum.

"On the 17th of November, 1879, a man, J. S., was admitted as a patient into the Essex County Asylum. He was then "highly suicidal," as described in the "statement," and was suffering from the effects of self-inflicted wounds. He was at first placed in the padded-room, and restrained by the strait waistcoat. This treatment continued until the 30th of November, after which he was allowed to sit in the ward in the day time, unrestrained, and after the 8th of December he was placed at night in the special dormitory for suicidal patients. Special instructions had been given that J. S. was never to be left alone. On the 18th December he was in the special charge of an attendant named Robert Alfred Jaques, who had no other

duty than that of attending to this patient. On this day, however, he allowed J. S. to be in the closet alone, while, as he stated, he (Jaques) went to calm another patient who had become excited; and on returning to the closet after an absence, according to his own account, of not more than four minutes, he found J. S. lying with his throat cut, and bleeding extensively. Dr. Amsden, the assistant medical officer, was in the ward, and immediately attended to J. S., who, however, died in a minute or two. The wound was inflicted with a razor belonging to Jaques, but it was not ascertained how J. S. obtained possession of it. We considered it abundantly clear that there had been culpable negligence on the part of Jaques, and expressed our confidence that his conduct would be severely dealt with by the Committee of Visitors. Subsequently we learnt that he had been discharged from the Asylum service, but not prosecuted.

“In the Hants Asylum a male patient, H. K., was discovered, 11 days after his admission, to have two broken ribs. The investigation of the Visitors and the medical superintendent failed to fix with any certainty the responsibility for this injury; and their inquiries were impeded by the fact that on admission no sufficient medical examination of the patient's person had been made. In reference to this omission we recommended the substitution of a more stringent general rule as to medical examination on admission than that which was then in force; and our recommendation was adopted by the Visitors, who also, on our suggestion, strengthened the staff of male attendants.

“A bad case of death by scalding occurred in the Barming Heath Asylum in the month of June. On the morning of the 6th, Emma Hughes, the charge nurse of Ward 17, having occasion to bathe a patient, E. G., employed another patient to give the bath, neither she (the nurse) nor any other attendant being present. The patient prepared the bath, but with water which was too hot, and by force placed E. G. in it, the consequence being that E. G. was so severely scalded that she died of the effects on the 15th of the same month. Hughes's conduct was in clear contravention of the bathing rules of the Asylum, of which she had full knowledge, and which expressly prohibited the giving a bath except by an attendant, and also the employment of a patient to turn on either hot or cold water. We at once expressed our readiness to take proceedings against her for wilful neglect. The Visitors, however, had her summoned before the magistrates, when she pleaded guilty and was fined £3, which was paid, and she was discharged from the Asylum.

Her punishment was, in our opinion, inadequate for the grave neglect and breach of rules of which she had been guilty.

"A death occurred in the Lancaster Moor Asylum on the 1st January, which forcibly illustrated the importance of that which we so constantly urge, namely, a thorough medical examination of patients on admission.

"A woman, H. A., was admitted on the previous 21st of December, from the Burnley Union Workhouse, in feeble condition, and apparently, as stated by the assistant medical officer, 'half-starved.' This gentleman received the patient, and made a slight examination, during which he observed a black eye and a skin eruption, but he did not specially examine the chest. The patient was put to bed, and on the 23rd symptoms of capillary bronchitis being observed, she was removed to the hospital. On January 1 she was much worse, and appeared to suffer much pain when coughing, and also from movement of the body. This attracted attention to the state of her ribs, when it was found that several were broken on each side. She died in the night of the 1st, and a post-mortem examination disclosed that two ribs on the right side and three on the left were broken.

"A coroner's inquest was held in this case, and several witnesses examined. The evidence of the medical superintendent and his assistant medical officer went to show that the fractures were of some standing, of at least a week's, and possibly a fortnight's, duration. The evidence of the asylum attendants negatived the hypothesis that the injuries had been occasioned in the asylum. That of the matron and of the pauper nurse who had charge of the patient in the Burnley workhouse (there being no paid attendant for the lunatic ward), proved that she had been during the three days she had been detained there, excited and violent, and had been continuously restrained by the strait waistcoat and otherwise; and the statement of the relieving officer who took the patient to the asylum was to the effect that she had gone quietly, and had not been violent on the journey.

"The jury found that the death of the deceased had been accelerated by the broken ribs and pleurisy, and that 'the evidence did not show by whom or how the fracture of the ribs was caused.' The jury directed attention to the insufficiency of the medical examination on admission, and commented on the want of proper provision for the care of lunatics in the Burnley workhouse.

"We entirely agreed with these remarks, and we further felt bound, in forwarding to the medical superintendent our

observations upon the case, to express our opinion that the deceased had not received in the asylum that amount of medical care and attention to which she was entitled.

“The remarks of the jury on the workhouse management were very just. It appeared from the evidence of the master that there were at the time of the inquest 19 male and 17 female imbecile patients, but no regular paid attendants, these inmates being attended to by paupers only, who were entrusted with the instruments of mechanical restraint and uncontrolled power of employing them. We have reason to fear that this system still continues in force. It rests with the guardians to alter it.

“In the Prestwich Asylum a patient, J. C., came by his death at the hands of a fellow patient, J. McG., on the 24th July. J. McG. was demented, but quiet, and apparently inoffensive. On the day mentioned he was at work with J. C. and other patients in the stackyard of the farm, and engaged in removing pieces of timber. He suddenly, and apparently without premeditation, struck J. C. with a heavy bar of iron, killing him on the spot. He was subsequently put on his trial for murder, but was, on arraignment, found to be insane, and was removed to Broadmoor Criminal Lunatic Asylum.

“A male patient died in the Rainhill Asylum in February, and the post-mortem examination disclosed the presence in the stomach and intestines of partly digested yew leaves. A branch of yew had also been found in the patient's pocket. The certified causes of death were disease of the heart and congestion of the liver and kidneys, but Dr. Rogers was of opinion that the irritant effect of the yew leaves had accelerated, or was partly the cause of the death. The leaves had been obtained from Irish yew-trees growing in the airing-court, and although not aware that any similar accident had occurred, Dr. Rogers thought it prudent to have these trees removed.

“L. S., a German, speaking but little English, was admitted as a patient into the Banstead Asylum in May. He was described as not suicidal in the ‘statement’ accompanying the order, but the medical certificate mentioned refusal of food, and indicated a form of insanity which might easily develop a tendency to self-destruction. In the morning of the 24th of July, at about a quarter to six o'clock, he was found dead in his bed in a single room, having strangled himself with a piece of linen bandage, which he had probably obtained from the infirmary, where he was employed in the day.

“At the inquest, it was stated by Dr. Claye Shaw that no symptoms of suicidal insanity had been observed in the

patient by him, and that none had been reported to him by the attendants, and, consequently, L. S. had not been treated and watched as a suicidal patient. No blame was attached by the coroner's jury to anyone concerned. We think, however, that there was enough in the medical certificate to have suggested some greater amount of precaution in the care of the patient.

"Two suicides occurred in the Colney Hatch Asylum during the past year, both of female patients.

"The first was that of M. P., who, in the night of 13-14th January, set her night-dress and bed clothes on fire, and on the 16th died from the effects of the burns thereby caused. This woman, who had previously been for some considerable time under certificates, was on the 14th of September, 1878 admitted to the Asylum, and was then considered to be suffering from recurrent mania, but was not described or thought to be suicidal. On the 16th of December, however, she refused her food, and on the 18th tried to set her clothes on fire, saying, 'she thought that higher powers had ordered her to do so.' She was in consequence removed to the infirmary ward, in order to be under the supervision of a nurse day and night. In this ward, on the night in question, there were 39 patients in charge of the ordinary day nurse, who was taking the night nurse's duties, the latter being on leave. There was also a special nurse in the ward in attendance on a woman in labour, who was lying in a small room opening out of the principal room, and was delivered during the night. The regular nurse was summoned to assist when this happened, and, while the special nurse attended to the child, she was engaged with the mother, and thus, as she stated on the inquest, was for half-an-hour taken from her regular duty of supervision. In the interval M. P. got up, lit a piece of paper at the gas burner over the door, which she reached by means of a chair, and getting again into bed, set fire to the clothes. The regular nurse, hearing a cry of 'fire,' went at once into the room where the deceased was and extinguished the flames. No special notice of the deceased patient's tendency to meddle with fire, or instructions as to watchfulness, appear to have been given to the nurses of the infirmary ward, though the nurse in charge on the night of the 13-14th stated that she was aware from 'general talk' that the patient had previously set fire to her clothes.

"On a review of all the circumstances of this case, we could not avoid coming to the conclusion that the death was due

to the imperfect arrangements made for the night supervision of the patients in the infirmary ward, and this conclusion we communicated to the Committee of Visitors.

"The other case of suicide in the Colney Hatch Asylum was that of Ann R., who was described on her admission in February 1878 as 'the subject of melancholia' and as suicidal, and who was found by a patient about 5.30 A.M. of the 10th of May, 1879, suspended by means of a jack towel to the top lintel of the W.C. in E dormitory, and quite dead. In the opinion of the medical superintendent, who was immediately summoned, the deceased had been dead an hour when he arrived. She had not, we are informed, been considered suicidal, and no special instructions as to her treatment had been given to her nurses. She slept in a small four-bedded dormitory opening out of a larger one, containing 64 beds, in which a night nurse sat. This nurse, however, had the supervision of 178 patients sleeping in five rooms on three floors, to all of which it was her duty to pay periodical visits, the head night nurse having also occasional rounds. The patients were of a chronic class, and considered to be quiet and harmless. It is probable that Ann R. had taken advantage of an absence of the night nurse from E dormitory to go to the closet. How she obtained the towel with which she hung herself did not appear.

"We were glad to learn that after this accident the Committee appointed a special night nurse for E dormitory alone. Both in this and the preceding case of suicide at this Asylum, we think an error of judgment was committed by the medical officers in not treating the patients as suicidal. In the one, the nature of the malady and the statements in the certificates certainly pointed to a suicidal tendency; and in the other, the previous attempt at injuring herself by fire should have suggested greater precautions than were adopted in consequence of that attempt.

"A patient who was admitted into the asylum at Thorpe in the forenoon of the 4th of April was found dead in his bed early the following morning. He had been admitted in a very feeble condition from the Aylsham Union Workhouse, and the circumstances of his removal gave rise to a correspondence, which we will refer to later on.

"The suicide by hanging, of a patient, John B., took place in the West Riding Asylum, at Wakefield, on the 27th of August. The patient had been in the asylum more than a year, and had so much improved in mental condition that the propriety of his going home had been mentioned to him by the medical

superintendent. This idea, however, appeared to be distasteful to the patient. At the time of the occurrence he was not considered to be any longer actively suicidal. Previously he had been kept under close observation, and it was thought possible that the suggestion of sending him home may have overcome his self-control. On a review of all the circumstances of this case, which were fully detailed to us by Dr. Major, we did not consider that blame attached to any one in the matter.

"An inquiry was held in July last, by two of our number, into the circumstances attending the death of Benjamin H., a pauper patient in the South Yorkshire Asylum at Wadsley.

"The coroner's jury had returned the following verdict at the inquest: 'The deceased died from inflammation of the lungs, accelerated or caused by a fractured sternum and three broken ribs, but as to where or when the injuries were inflicted, there is not sufficient evidence before the jurors.'

"This death, in apparently suspicious circumstances, created a considerable amount of excitement in Sheffield and the neighbourhood.

"The Committee of Visitors failed to elicit anything more definite than the coroner's jury had done.

"Our inquiry was made at the asylum, and lasted four and a half days, 35 persons being examined on oath, and 10, chiefly patients, making statements not sworn to.

"The patient was a canal-boat hauler, 33 years old, stout and strong, but not tall. When admitted he was so restless that the medical superintendent who examined him was unable to satisfy himself as to the presence or absence of broken ribs. It seemed, however, on the whole, pretty clear that on admission the bones of the chest were uninjured. The patient died on the 28th of June, seventeen days after admission, when the injuries reported in the verdict just quoted were found out.

"Searching inquiries were made into the care and treatment of the patient throughout the whole period of his residence in the asylum. The general evidence showed that these had been quite proper. A discharged patient, indeed, swore to one violent assault on the deceased by an attendant, but this was directly contradicted, and shown to be an exaggerated account of a fall, originating from a push given by the attendant, while injudiciously endeavouring to deal with the patient single-handed. From this fall no bad effects resulted.

"It appeared, however, that on the 22nd of June the patient had been placed, on account of his continued restlessness, in a single room. Here he suddenly climbed up on to the upper edge of the lower sash of the sliding window shutter, and thence fell

or sprang down a height of six feet, coming down heavily and doubled up, his knees bent, and ‘driven up into his stomach,’ as one witness described the occurrence.

“The fall was duly reported, but it was not thought serious, especially as the deceased rose up immediately, neither exhibiting pain at the moment or subsequently, nor showing external signs of injury.

“Still it seemed possible, and, indeed, according to surgical experience, very possible, that the injuries to the breast-bone and ribs might have happened on this occasion, and so our colleagues reported.

“The attention of the Committee of Visitors was called to the construction of the window shutters of the single rooms, which required, in our opinion, some alteration to render impossible the recurrence of such an accident.”

On the 1st of January 1880, there were 2,831 patients in the sixteen Registered Hospitals. The total admissions during the year 1879 being 900. The condition of these institutions, with one exception, have been spoken favourably of by the Commissioners in Lunacy. The exception is the Liverpool Lunatic Hospital, and this chiefly in consequence of the financial arrangements.

The Licensed Houses in England and Wales, or what are generally known as Private Asylums, on the 1st of January last, were 99 in number, of which 37 were Metropolitan, and 62 Provincial ones.

By the statistical table it may be seen that the number resident at the commencement of the year was 4,549, divided into 1,771 males, and 1,637 females of the private class, and 427 males and 714 females belonging to the paupers.

Three cases of suicide alone took place at these private licensed houses, one at Haydock Lodge, the others at Stretton House and Grove House, All Stretton.

With regard to the single patients, the Commissioners give some valuable remarks and regulations, which we give *in extenso*. The register shows the following number:—

	Males	Females	Total
Number, 1st January 1879 . .	192	280	472
Registered during the year . .	71	86	157
Discharged and removed . .	56	65	121
“ of whom recovered . .	13	11	24
Died	21	19	40
Remaining 1st January 1880 . .	186	282	468

Besides this number, there are 208 persons of unsound

mind, found so by inquisition, and who are understood to be residing with their committees.

One suicide of a single patient is reported, by means of opium, whilst on leave of absence.

Acting under the powers conferred upon the Commissioners in Lunacy, of the 8th & 9th Vict. c. 100, s. 90, a new form for the Medical Visitation Book or Medical Journal, in which the progress of the case of a single patient is to be entered.

We here give the "Provisions of the Law as to single patients," as given in the Appendix M. of this Report. We consider the details so valuable as to be given in their entirety:—

"PROVISIONS OF THE LAW AS TO SINGLE PATIENTS.

"The charge or detention of a lunatic (which expression includes an idiot and a person of unsound mind) as a single patient in a Private House, not *licensed* for the reception of lunatics, is permitted by law on the following conditions:—

"1. The procuring of an *order for reception* signed by some person, requesting the superintendent or proprietor of the house, or the person who is to take the charge, to receive the patient; and of two *certificates*, each signed by a registered medical practitioner, stating that he has separately examined the patient, and on such examination found him to be of unsound mind.

"*N.B.*—Where a patient already under certificates is removed with consent of the Commissioners in Lunacy, fresh certificates are not required by the person taking charge.

"2. The transmission to the Commissioners in Lunacy at their Office, 19 Whitehall Place, London, S.W., of notice of the reception of the patient, together with copies of the order and certificates, or in case of a patient transferred from other care, copies of the transfer order and the Commissioners' consent thereto.

"3. The visitation of the patient at short stated intervals by a registered medical practitioner (appointed by the friends of the patient), *who did not sign either of the certificates of insanity or the order for reception*, and who derives no profit from the *care or charge* of the patient, and who is not a partner, father, son, or brother of any person deriving profit from such care or charge. He is called '*the medical attendant*.'

"*N.B.*—This condition is not necessarily affected by the circumstance that the person taking the charge is himself a medical man.

Order and
certificates.
8 & 9 Vict.
c. 100 s. 90.
16 & 17 Vict.
c. 96, ss. 4-8.

Notice of
admission
and copies,
&c. to Com-
missioners.
Ibid. 25 & 26
Vict. c. 111,
s. 28.
Admission
on transfer.
16 & 17 Vict.
c. 96, s. 20.

“4. The visitation of a patient at any reasonable time or times by one or more of the Commissioners in Lunacy.

Visits of Commissioners. 8 & 9 Vict. c. 100, s. 92, 16 & 17 Vict. c. 96, s. 27.

“EXCEPTIONS.

“These Conditions do not apply to cases where a Committee of the Person has been appointed by the Lord Chancellor, nor where payment is not made on account of nor profit derived from the charge of the lunatic.

“OF THE ORDER AND CERTIFICATES, ETC.

“The forms are prescribed by Act of Parliament, and must be strictly adhered to.

16 & 17 Vict. c. 96, s. 4, Sched. A.

“Instructions for filling up the forms in conformity with the law, and for transmitting the necessary copies, the notice of admission, and statement of condition, have been prepared by order of the Commissioners in Lunacy. On receipt of an application containing the names and addresses of the intended single patient, of the person who is to take charge, and of the person who places the patient in charge, the Commissioners will give a set of blank forms with instructions.

“OF MEDICAL VISITATION.

“1. After two days and before the expiration of seven clear days from the day of reception, the medical attendant is to forward to the office of the Commissioners, on a prescribed form, a report or statement of the mental and bodily condition of the patient.

Statement of condition. 25 & 26 Vict. c. 111, s. 41.

“2. The person taking charge is bound to cause the patient to be visited at least once in every two weeks by the medical attendant.

Fortnightly visits. 8 & 9 Vict. c. 100, s. 90.

“3. The medical attendant must at each visit enter in a book to be kept at the house, according to the subjoined form, the date of each of his visits, and a statement of the several particulars required as to the condition and circumstances of the patient and of the house.

Entries, medical visitation book. 8 & 9 Vict. c. 100, s. 90.

“4. These visits may, by special permission of the Commissioners,* be made less frequently than once in every two weeks; but in such case, where the patient is under the care or charge of a medical man, such medical man must himself make an

Less frequent visits. 16 & 17 Vict. c. 96, s. 14.

* This permission is not (as a rule) accorded until the patient has been visited once by a Commissioner.

entry once at the least in every two weeks in a book to be called the 'medical journal.' *

Annual
reports.
16 & 17 Vict.
c. 96, s. 16.

"5. Every medical man who visits a single patient, or under whose care a single patient may be, must, on the 10th of January, or within seven days thereof, in every year, report in writing to the Commissioners the state of health, mentally and bodily, of the patient, and such other circumstances as he may deem necessary to be communicated. Each annual report should give all these particulars fully, even although no change may have occurred since the previous report.

" MISCELLANEOUS PROVISIONS.

Restraint
and
seclusion.

"The regulations of the Commissioners, made under the powers of Act 25 and 26 Vict. c. 111, s. 42, require that treatment of the patient by restraint or by seclusion should be recorded in the medical journal or visitation book.

"By restraint is meant mechanical restraint, as, for instance, the use of a 'strait-jacket,' or the tying down of the patient to a chair, or securing him in his bed or by gloves.

"Seclusion is defined by the Board as 'compulsory isolation in the day-time,' as by locking up the patient in a room alone.

"In order that a proper record of such treatment (if resorted to), may be kept, the person in charge of the patient, if not himself a medical man keeping the journal, must keep a note of the days on which either restraint or seclusion is resorted to, and of the length of time on each occasion, and must produce such note to the medical attendant on his next visit.

Changes of
residence.
16 & 17 Vict.
c. 96, s. 22.

"When the person in charge of a single patient proposes to change his residence, and to remove the patient with him, seven clear days' notice of the proposed change, with the exact address and designation of the new residence, must be sent to the Commissioners and to the person who signed the order for reception of patient.

Transfers.
16 & 17 Vict.
c. 96, s. 20.

"If it is proposed to remove the patient to the care or charge of another person, the consent to an order of transfer should previously be obtained from the Commissioners, otherwise a fresh order and certificates will be necessary.

Removals
for health,
or on trial.
Ibid. s. 22.

"If it should be desired to give the patient liberty of absence anywhere, for a definite time, for improvement of his health, or for a trial of his powers of self-control, the consent of the Commissioners must first be obtained; the written consent of

* N.B.—These books, or book, and the original order and certificates and the transfer order, if any, must be so kept that they may be accessible to any Commissioner in Lunacy visiting the patient at any time.

the person who signed the order must accompany the application, as well as a statement by the medical attendant showing the fitness of the patient for such absence or trial.

“If a definite place is named in the written consent of the Commissioners, the removal of the patient to any other place, without first obtaining a fresh consent, will operate as a *discharge*, and will entail the necessity of *fresh order and certificates*. This will also be the case if the patient is not brought back before the expiration of the leave of absence, or of any extension thereof.

“The death of the person to whom the order is addressed likewise operates as a discharge, and renders fresh certificates necessary. Should the person in charge, therefore, become dangerously ill, the friends of the patient should at once be communicated with, in order that arrangements for a transfer may be made.

“Every letter written by a single patient, and addressed to the Commissioners in Lunacy, must, by law, be forwarded unopened, unless special directions to the contrary have been given by the Commissioners.

Letters.
25 & 26 Vict.
c. 111, s. 40.

“Every letter written by a single patient, and addressed to any person other than the Commissioners, must be forwarded to the person to whom it is addressed, unless the person in charge of the single patient prohibit the forwarding of such letter, by endorsement to that effect under his hand on the letter, in which case he must lay all letters so endorsed before the Commissioner who next visits the patient.

Letters.
25 & 26 Vict.
c. 111, s. 40.

“Immediate notice must be forwarded to the office of the Commissioners in case of the discharge, removal, escape, and recapture of a patient.

Notices.
8 & 9 Vict.
c. 100, ss. 53
54, 55, & 90
continued
and
extended.
16 & 17 Vict.
c. 96, ss. 21,
22.

“DEATH.

“Notice of death in the subjoined form must be sent to the Commissioners within 48 hours of the death.

“The medical man who attended the patient during the illness, which terminated in death, is to prepare and sign a statement setting forth the time and cause of the death, and the duration of the disease of which the patient died. Such statement should be entered in the medical journal or visitation book, and a copy of such statement, certified by the person in charge of the patient, must be transmitted by him to the coroner for the county or borough within two days after the death.

Statement
for the
coroner.
25 & 26 Vict.
c. 111, s. 44.

“PENALTIES.

“The following acts or defaults are declared by the Lunacy Acts to be misdemeanours punishable by fine, imprisonment, or both :—

“1. The reception into an unlicensed house, or the taking the care or charge of any person therein as a lunatic, without having the order and certificates prescribed by law. (Except in the case of a person deriving no profit from the charge, or a Committee appointed by the Lord Chancellor.)

“2. The neglect to transmit copies of the order and certificates (when obtained), and the statement of condition to the Commissioners in Lunacy.

“3. Failure in causing the patient to be visited fortnightly by a medical man, unless such fortnightly visits have been permitted by the Commissioners to be paid less frequently.

“4. The making of an untrue entry in the medical visitation book, or medical journal, by the medical man keeping the same.

“5. Neglect to send notice of discharge or death to the Commissioners, or statement of cause of death, &c., to the coroner.

“The neglect to deal with a patient’s letters as above directed is punishable by a penalty of 20*l.*; the neglect to send notice to the Commissioners of escape and retaking by a penalty of 10*l.*; and the failure to comply with regulations as to entries in medical visitation book by a penalty of 5*l.*

“To keep two or more lunatics in a house a license is required.

“By order of the Board,

“(Signed) C. S. PERCEVAL,
“*Secretary.*

“1st January 1880.”

FORM OF MEDICAL VISITATION BOOK (or MEDICAL JOURNAL) for SINGLE PATIENTS, Authorised by the Commissioners in Lunacy, 1st December 1879.

Date	Mental Condition. What evidence of Insanity? Any and what change since last Visit?	Bodily health and condition	Restraint or Seclusion since last Visit. When and how long? By what means? and wherefore?	Visits of Friends. Date of Visit. Name of Friend	State of House and Furniture, Bed and Bedding. Supply and Condition of Wearing Apparel	Dietary proper? If not, state the reason	Employment, Exercise, and Amusement
	<p>*** The first entry after admission to be a sketch of previous history of case, and full particulars of mental and bodily condition, and not to be entered here, but on blank pages to be left for the purpose at the beginning of book.</p>						

FORM OF NOTICE OF DISCHARGE.

I hereby give you Notice, That
 was discharged therefrom (a)
 Dated this day of 188 .
 To the Commissioners in Lunacy.

, a private patient, received into this house on the day of 188 .
 on the day of 188 .
 (Signed) Proprietor (or Superintendent) of House.
 (a) Recovered, or relieved, or not improved.

FORM OF NOTICE OF DEATH.

I hereby give you Notice, That
 of 188 , died therein on the day of 188 .
 Dated this day of 188 .
 And I further certify, That
 cause of death of the said was present at the death of the said House.
 [ascertained by *post-mortem* examination (if so)], was , and that the apparent
 (Signed) Medical Attendant of the said .
 To the Commissioners in Lunacy.

On the 1st of January, 1880, there were 16,464 (7,206 males and 9,258 females) detained in workhouses. With regard to the management of these places, the Commissioners state:—

“It will be observed that at the present time there are a large number of each sex in workhouses who are classed as of unsound mind, and who are consequently visited by us. There has been, on the whole, considerable improvement in the accommodation and treatment of the classed imbeciles, during the past ten years, and we can, with pleasure, report that in a large number of instances, the recommendations made by us have been favourably received by the guardians and supported by the Local Government Board.

“It should be borne in mind, that chronic harmless lunatics or imbeciles are the only cases that ought to be detained in a workhouse, and our efforts are always strongly directed against the reception and detention of acute cases. We have often found it necessary to order the removal of decidedly insane patients, who ought, in the first instance, to have had the benefit of Asylum treatment; and in some of the larger workhouses we frequently meet with inmates suffering from long-standing melancholia, where the history of the case gives the impression that early treatment might have resulted in cure. The Act of Parliament has clearly defined the duties of both medical officers and parish officials, and it is to be regretted that false ideas of economy, or other reasons, should be allowed to have weight, and a course be pursued which cannot fail of being prejudicial to the patient, and, ultimately, of increasing the number of the incurable insane dependent on the rates.

“On the other hand, in many instances, an inclination exists to send off to an Asylum old chronic cases, because they are a little troublesome and difficult to manage. This is especially so in those workhouses where there are no regular paid attendants, as there ought always to be when the imbeciles are separated from the other inmates. We thus find in our County Asylums many old chronic patients who, under proper supervision, might be well cared for in workhouses.

“We must not be understood to be advocating the removal of all working patients, of a chronic type, from County and Borough Asylums, as this might lead to serious inconvenience. Neither do we lose sight of the fact, that the experience of Medical Superintendents of Asylums shows, that where patients have been discharged to workhouses, where the conditions of proper supervision, cheerful rooms, suitable clothing, a liberal dietary, and the means of bodily exercise do not exist, they have degenerated rapidly, and have been returned to the Asylum as unmanageable.

“Still, under suitable arrangements, a large number of the chronic imbecile class might be well cared for in the workhouses, and room would thus be found in the County Asylums for the treatment of recent cases, thus, to some extent, meeting the urgent want of asylum accommodation, which is at present so generally felt.

“Without entering, on the present occasion, into criticisms of the management of particular workhouses, we may report generally, that although the standard is certainly higher than it was some years ago, yet that in many of these establishments, the treatment and accommodation provided for the imbecile paupers are open to grave objection.

“For instance, we find that there is a want of night supervision of epileptic cases in many workhouses, even when the number of such cases is large. Thus, in one of the Lancashire Workhouses, we found 58 male and 86 female epileptics, but no attendant sitting up at night to guard against accident of any kind.

“The bathing arrangements, again, in many Workhouses, are not satisfactory, but in this matter there appears to be a gradual improvement.

“The diet provided for the imbecile class varies considerably. We endeavour to procure for them as a *minimum*, three solid meat dinners weekly. In this we have not been uniformly successful, and some boards of guardians consider that meat twice a week is sufficient. We shall not, however, relax our efforts in this direction, and in that of improvement in other respects.”

Four cases of prosecution for infringement of the Lunacy Laws have taken place for taking illegal charge of persons of unsound mind, were brought to the notice of the Commissioners during the past year. In three of these cases the circumstances justified the Board in abstaining from prosecuting for the misdemeanour, on condition of an apology being published in the newspapers. In the fourth case, however, proceedings were taken:—

“Having received information that a person named Samuel Hancock, living at Alsager, near Crewe, had charge of a lunatic patient, Mr. L. E., in respect of whose reception by Hancock no notice had been sent to our office, we obtained an order from the late Lord Chancellor under the provisions of Sects. 112 and 113 of the Act 8 & 9 Vict. c. 100, armed with which, two of our number, accompanied by Dr. J. T. Arlidge, of Newcastle-under-Lyme, visited the house which had been indicated to us. This was found to be occupied by Samuel Hancock, and in his charge was L. E., who evidently was of unsound mind, and

whom, Hancock admitted, he received for profit without order and certificate. L. E. had previously been a patient in a Provincial Licensed House, from which he had been discharged, but 'relieved' only, in 1872.

"We directed a prosecution to be commenced. Hancock was committed by the magistrates for trial at the Chester Summer Assizes, at which he pleaded guilty, and the learned judge (Mr. Justice Manisty), who presided, considered that, in the circumstances of the case, it was sufficient to sentence Hancock to come up for judgment if called upon to do so. No cruelty to, or very serious neglect of the lunatic by Hancock was observed, though the sleeping accommodation supplied was far from satisfactory.

"The patient was, soon after the visit above referred to, duly certified to be of unsound mind, and his reception by Hancock made legal."

The Commissioners have during the past year considered the class of attendants in the various asylums, and prepared the following circular letter, which was, however, supplemented by their own personal inquiries as to the wages of the attendants:—

"OFFICE OF COMMISSIONERS IN LUNACY:

"19 Whitehall Place, S.W.,

"6th May 1879.

"SIR,—In a Circular Letter addressed about twenty years ago (March 31, 1859), by direction of the Commissioners, to the proprietors of licensed houses in the metropolitan district, will be found the following remarks, called forth by a consideration of the subject of the duties and qualifications of attendants upon the insane:—

"The particular qualifications for attendants, in addition to moral character, patience, and good temper, and cleanly and orderly habits, depend upon the classes and stations in life of the patients under their care.

"As respects pauper patients, the attendants should be capable of directing and promoting their occupations and amusements, of reading to them, and of instructing them in their various trades and employments.

"Qualifications of a higher order, and a superior degree of education, are required in attendants upon private patients, to whom they are necessarily, to a certain extent, companions. In this point of view it is very desirable that the attendants should not have to perform duties of a menial kind, such as belong more properly to domestic servants. It is scarcely necessary to observe that they should be respectably dressed, and that they should be intelligent and courteous in manner.

“In establishments requiring a considerable number of attendants, it is important that there should be a head attendant, to see that the ordinary attendants perform their duties with regularity, and that they are civil and attentive to the patients.

“In order to ensure the services of good and efficient attendants, and to prevent a frequent change of such persons, it is indispensable that they should be adequately paid, and that they should be encouraged in a course of good conduct by a periodical advance in their wages. It is important also that they should be afforded regular opportunities for temporary absence and relaxation.’

“These remarks, the Commissioners think, may usefully be repeated at the present time, for, although the care and treatment of the insane have, since the date of the Circular, in most respects altered greatly for the better, improvement in the character and position of attendants has not been nearly so marked.

“Charges of rough and unkind usage continue to be made, and not always without reason: dismissals for actual misconduct (especially among male attendants) are still numerous; while in many quarters the Commissioners hear complaints as to the difficulty experienced in procuring and retaining the services of satisfactory persons.

“Twelve months appears now to be an exceptionally long period of service for attendants in the larger licensed houses. In some houses the changes are very frequent, and the consequent annoyance to the patients is necessarily great.

“The Commissioners are convinced that much of the evil above referred to arises from the insufficiency of wages given to attendants, and that they must renew their efforts to procure throughout the houses within their immediate jurisdiction a more liberal scale of pay.

“They therefore address to all the proprietors in the metropolitan district this letter, embodying their views on the subject. In doing so they are fully aware that in more than one case the scale of wages actually in existence is already quite what it should be.

“The Commissioners think, in the first place, that as a rule, no person under 20 years of age ought to be employed in the immediate and direct supervision of insane patients.

“In the next place, they still hold the opinion, expressed in 1859, that, in order to encourage a superior class of persons to enter the ranks of attendants, none of the duties of ordinary menial servants of either sex ought to be cast upon them.

“Entertaining these views, and considering the general rise

in wages, the Commissioners are of opinion that the initial wages of male attendants should not be less than 30*l.*, of female attendants not less than 20*l.*, with, in each case, a prospective annual increase.

"They consider that a male attendant of sufficient experience to take charge of a ward ought not to receive less than 40*l.* a year.

"Where the majority of patients received are of the private class, and are persons of good pecuniary means, the scale here suggested will be, in the Commissioners' opinion, too low. Higher wages are, to their knowledge, given in several such establishments.

"Concurrently with good wages, attention to the comforts of the attendants, especially when off duty, should be systematically given, were it for no better motive than that of inducing them to remain in their situations. Some provision for rational amusement and social enjoyment during leisure hours should be made, according as circumstances may allow. In several county asylums this matter is meeting with deserved attention, and the licensed houses should not be behind them.

"I am to conclude these observations by expressing the Commissioners' confident hope that you will give the whole subject your best attention, and, in particular, if it should happen that your scale of wages has been hitherto on a less liberal footing, that you will reconsider it as soon as possible, with a view to improvement.

"I am, &c.,

"CHARLES SPENCER PERCEVAL,

Secretary.

"To _____
House."

With regard to a subject concerning which there has been much discussion, the Commissioners add:—

"Although this Report is limited to the demands of the year 1879, we cannot omit recording that among the measures announced in Her Majesty's Speech on the opening of Parliament in February 1880, was a Bill for Consolidating and Amending the Lunacy Laws.

"We are fully sensible that the dissolution of Parliament and subsequent change of the Ministry, events which have taken place during the preparation of this Report, may lead to a postponement of legislation on this head."

Such remarks, coming from gentlemen who protect in every way the interests and welfare of the insane, should be sufficient to disperse the "hare-brained chatter" of those clamouring for lunacy reform.

ART. VI.—LUNACY IN SCOTLAND.

THE TWENTY-SECOND ANNUAL REPORT OF THE COMMISSIONERS
IN LUNACY FOR SCOTLAND.

THE Annual Reports of the Lunacy Commissioners are among the most valuable contributions to the literature of insanity; they, in effect, provide the material information by which the working theorist is enabled to develop his views, and on the basis of which the practical physician can determine his treatment. They have, indeed, become an essential part of the alienist's resources; without them he would be at a loss in many hours of trying emergency; their cessation would be a fatal bar to general progress in the therapeutics of insanity. It is, therefore, a matter for much congratulation that these reports are of the excellent nature they are, and of that one now more particularly under notice, we can speak in terms of unqualified praise. In every respect it is admirable; exhaustive in detail, rich in experience, historically complete also, it presents the reader with an invaluable *résumé* of the actual condition of the country of Scotland in regard to its lunatic population, and the means available for their cure and improvement.

The Commissioners in Lunacy for Scotland entered on their duties in 1858, at which time the insane registered population amounted to 5,823 persons. There are now on the official books 9,624 names, and an analysis of the numbers, their classification and distribution, reveals many facts of importance and interest in connection with the growth and spread of madness in its several forms. The two classes of patients, private and pauper, have varied within two-and-twenty years since 1858, only in the direction of a steady increase, numerically, except that the paupers placed in private dwellings have decreased to the amount of 369. The explanation of this considerable change is afforded in the existence of a parliamentary grant towards the cost of their maintenance, and the assistance thus afforded towards their being placed under proper care in establishments. There is traceable a connection between this and the increasing readiness generally exhibited to submit to asylum treatment—a very important influence in its bearing on the actual increase in the number of insane persons under the official cognizance of the Commissioners. This increase, after all deductions, is a net

total of 3,801, or 65 per cent. for the period since 1858—a startling fact in relation with the increase of population during the same period, this being only in the ratio of 20 per cent., were it not for the assurances held out that it is a consequence of the better appreciation of the benefits of asylum treatment.

The report considers, in great detail, all the facts bearing on these changes, and then discusses the progress made during the year in the various institutions for the insane throughout the country. We regret that the pressure on our space forbids a lengthy notice of this most important volume in our present number, but we shall return to it in our next issue. We will only add that it reflects the highest credit on the Commissioners to whose industry it is due.

ART. VII.—LUNACY IN NEW SOUTH WALES.

WE have received through the courtesy of Dr. Manning, the Inspector-General of the Insane for this colony, his report.

It contains a full account of the condition of lunacy in the various departments.

The following is the Distribution of the Insane :

	Male	Female	Total
Hospital for the Insane, Gladesville . . .	330	347	677
" " Paramatta (free) . . .	544	203	747
" " " (convict) . . .	19	5	24
" " " (criminal) . . .	51	6	57
" " Callan Park . . .	107	—	107
" " Newcastle . . .	124	85	209
In the Temporary Hospital for the Insane, Cooma .	57	—	57
In the Licensed House for the Insane, Cook's River	6	127	133
Total	1,238	773	2,011

The details connected with insanity in these various institutions are very accurately described.

The population of New South Wales in the year 1879 was 734,282, and the proportion of insane to the population was 1 in 365, or 2·74.

The statistical tables are very carefully compiled, and we congratulate Dr. Manning on the excellency of his Report.

ART. VIII.—FASTING AND FEEDING :

A DETAILED ACCOUNT OF RECORDED INSTANCES OF UNUSUAL
ABSTINENCE FROM FOOD, AND OF CASES ILLUSTRATING IN-
ORDINATE APPETITE.

BY THE EDITOR.

THE widespread interest in the subject of this paper, excited by recent successful and unsuccessful attempts to sustain life under abnormal conditions, and the existence of a general desire for information respecting the history of similar efforts made in the past, have induced me to collect the narratives here brought together. No explanation need be offered of the apparent want of connection to be observed in the article, although as far as possible a definite sequence has been maintained. The literature of the subject is, indeed, most extensive, and this, in place of making the task of collating an easy one, has rather served to embarrass in the effort to present the most reliable experiences. It must not be supposed that all the stories here collected are to be received as trustworthy; many, indeed, bear the stamp of highly imaginative genius; but all possess more or less interest to make them worthy of record. Some hope is entertained that the labour expended on this essay may be productive of good, by stimulating scientific inquiry into the circumstances attending such cases as may come under the observation of practitioners in their usual course. Opportunities for this are, unfortunately, of frequent occurrence in the practice of physicians engaged in the treatment of insane patients; and it may be, too, that they will obtain valuable hints from those cases of hallucination mentioned in this paper. There is, undoubtedly, very much yet to be learned, concerning the physiology of starvation, and not a little of the knowledge to be gained is of a kind most readily accessible to the superintendents of asylums. As a matter of simple interest, however, apart from the scientific aspect, an abstract of instances of abnormal appetite may be not unacceptable to the reading public.

That life can be preserved, and the ordinary duties of it performed, on a diet comparatively simple and limited in amount, is an accepted truth with large numbers of people at this time; and as confirming this opinion, the following account, from "The Book of Wonderful Characters," is possessed of much interest :—

“Thomas Wood was born on the 30th of November, 1719, of parents who were apt to be intemperate in their manner of living; he was subject to various disorders, particularly the rheumatism, until he attained the age of thirteen years. He then had the small-pox, and from that time became healthy, to the age of about forty-three years. From his attaining the state of manhood to this period, but especially during the latter part of the time, he indulged himself, even to excess, in fat meat, of which he used to eat voraciously three times a day, together with large quantities of butter and cheese. Nor was he more cautious with respect to strong ale, which was his common drink. About his fortieth year he began to grow very fat, but, finding he had a good appetite and digested his food without difficulty, and that his sleep was undisturbed, he made no alteration in his diet. It was in his forty-fourth year that he first began to complain of the heart-burn, want of sleep, frequent sickness at his stomach, pains in his head, &c. He had now almost a constant thirst, a great lowness of spirits, violent rheumatism, and frequent attacks of the gout. He had, likewise, two epileptic fits; but the symptom which appeared to him to be the most formidable was a sense of suffocation, which often came on him, particularly after his meals. Under such a complication of diseases, every day increasing, he continued till the month of August 1764. At this time the Rev. Mr. Powley, a worthy clergyman in the neighbourhood, observing his very ill state of health, and the extreme corpulence of his person, recommended him an exact regimen; and pointed out the ‘Life of Cornaro’ as a book likely to suggest to him a salutary course of living. This work convinced him that intemperance was the principal cause of all his complaints, and he therefore determined to try whether, the cause being removed, the effects might not cease. However, he thought it prudent not to make a total change in his diet suddenly; accordingly, he at first confined himself to a pint of ale every day, and used animal food sparingly. This method he soon found to answer to his satisfaction, for he felt easier and lighter, and his spirits became less oppressed. These good effects encouraged him to proceed in his experiments, and, therefore, after he had pursued the regimen before mentioned during two months, he deducted from his allowance half the former quantity of ale, and was still more sparing of gross animal food. In this course he continued till the 4th of January, 1765, when he entirely left off all malt liquor, and in the following month he began to drink only water, and to eat none except the lighter meats. Under this degree of abstinence, although some of his complaints were relieved, yet some of them remained in full force. The

rheumatism tormented him; he then used the cold bath, and next the dumb-bell, in which he persevered. Water was his only drink from the beginning of January, 1765, to the 25th of the following October. From this day he drank no more until the 9th of May, 1766, when he drank two glasses and a half of water; after that period he drank no more of any liquor whatever, except only what he took in the form of medicine. He then avoided cheese, then butter, and on the 31st of July in the same year was the last time he tasted animal flesh. From that period he principally confined himself to pudding made of sea biscuit. He allowed himself very little sleep, generally going to bed at eight o'clock in the evening, sometimes even earlier, and generally rising about one o'clock in the morning, but being very rarely in bed after two. Under this strict course of abstinence he continued to live, and he expressed, in the highest terms, the great pleasure and tranquillity of mind which he enjoyed in consequence of it. The poor diet to which he accustomed himself was as agreeable to his palate as his former food used to be; and he had the additional satisfaction to find his health established, his spirits lively, his sleep no longer disturbed by frightful dreams, and the strength of muscles so far improved that he could carry a quarter of a ton weight, which weight he in vain attempted to carry when he was about the age of thirty years. His voice, which was entirely lost for several years, became clear and strong. In short, to use his own expression, he was metamorphosed from a monster to a person of a moderate size; from the condition of a decrepit old man to perfect health, and to the activity and vigour of youth. His flesh became firm, and his complexion well coloured.

“Prejudiced by a common prevailing superstition, Mr. Wood never suffered himself to be weighed, either during the state of his extreme corpulence, or after his reduction, but it is conjectured that he lost ten, or perhaps eleven stone weight. On being asked why he submitted to such very strict rules of diet, he answered that, as he was ten years older than Cornaro was when he began his regimen, he thought that, on that account, a more severe and abstemious course was necessary for him, and that he was greatly influenced by Dr. Cheyne's opinion, ‘that Cornaro would probably have lived longer had his regimen been more strict.’ To the question what first induced him to abstain from all drink, he answered, that it happened one day that the servant had forgotten to bring his water at dinner, as usual; that, being then full of business, he did not think of calling for any, and that, having found himself easier and less oppressed by that meal than common, and determined to try whether a total omission of liquids might not be an

improvement to his diet, he soon found the experiment to answer. He added that he was further encouraged to abstain from liquids by an observation he had made in feeding hogs. He never allowed those animals to drink, and to this he attributed the excellence of his pork ; it being greatly valued on account of the whiteness and firmness of the flesh. Mr. Wood was a great enemy to all fermented liquors, to butter, and to salt. Nay, he even doubted of the wholesomeness of common bread, meaning bread which had undergone the process of fermentation. The pudding, which was his sole support during two years, was made as follows : three pints of skimmed milk, boiling, were poured on one pound of the best sea biscuit, broken into pieces. This was done over night, and these ingredients were left to stand together until the following morning, when two eggs were added. This compound, being boiled in a cloth about the space of an hour, became a pudding of sufficient consistency to be cut with a knife. Of this his quantity used to be one pound and a half at four or five o'clock in the morning, as his breakfast, and the same at noon, as his dinner, after which he abstained from food until the next day.

“The case of Thomas Wood was attested as truth by two clergymen, a churchwarden, a physician, and an apothecary of the place he lived in. An account of him was likewise drawn up by Sir George Baker, and inserted in the second volume of the *Medical Transactions*.

“Thus, by extreme abstinence and regularity, he prolonged an impaired constitution, and died in the year 1783, aged sixty-three.”

We may accept the case of Mr. Wood as an authentic account of abstinence, without much doubt ; but whether that of Eve Fleigen, quoted below, is equally trustworthy, must be determined by each reader for himself. “The Book of Wonderful Characters” is the source of the story, the authorities for it being chiefly Henry Wilson and James Caulfield.

“Eve Fleigen, or Vliegen, was a native of the Duchy of Cleve, in Germany. She is said to have lived long upon no other nourishment than the smell of flowers. Under one of the extant portraits of her are the following lines :—

Twas I that pray'd I never might eat more,
'Cause my step-mother grutched me my food ;
Whether on flowers I fed, as I had store,
Or on a dew that every morning stood
Like honey on my lips, full seventeen year.
This is a truth, if you the truth will hear.”

Eve Fleigen would have been just the wife for a noble poet of the present century, who hated to see women eat.

This story may keep company with Pliny's relation of the Astomi and with that of the Chinese virgins, who are said to conceive by smelling at a rose. Yet the legend has a fine poetical sentiment underlying it. Has there not for all of us been a time when our heart was so full of the spring that—

It seem'd awhile that bounteous Heaven
Nought else for man's support had given
But sky, and trees, and *flowers*?

In cases of forced abstinence from food, under circumstances occasioned by accident, &c., there have been many lives saved by what would seem the most insufficient means. The *Encyclopædia Britannica* cites that of "John Brown, an Ayrshire miner, who lived twenty-three days buried in a coal-mine, without swallowing anything but small quantities of chalybeate water sucked through a straw, as a well-authenticated instance of how little will sustain life, especially in a contaminated atmosphere, which, by diminishing nervous excitability, would mitigate the cravings of hunger."

A very similar instance is recorded in vol. xiii. (1683) of the *Philosophical Transactions*, of which the following is a verbatim reprint. It may be safely assumed that the *calx* referred to at the end chemically resembled the solid constituents of John Brown's chalybeate draught:—

"Some *Colliers* working in a *Cole-Pit* at *Herstol*, about half a League from *Liege* on our *Shrove Munday Feb* betwixt 7 and 8 in the morning, one of them peirced a *veine* of *water*, which gushing in violently drowned one, those that were near the mouth of the Pit were drawn out, but four of them being further within saved themselves upon a little ascent within the *Mine*, which has several *Lanes* or *Allies* in it, and were shut in by the *water* which stopt their passage out. 24 days were spent in drawing off the water rather to render the *mine* useful again then out of any hopes of saving the men; at last on *Thursday* March the 9th, being the 25th of their confinement, *men* entred in, found these 4 alive, and drew them out, and I myself among many others saw and examined them about these *particulars*: They had not a morsel of Bread with them, but lived on the *water* of a little *Fountain* which broke out by them: 2 *bottles* of which I caused to be *evaporated* to see if it were anything extraordinary, and found nothing but a scarce perceptible *Calx* remaining."

Fodéré ("Médecine légale") states that some workmen buried in a damp quarry were extricated alive after a period of 14 days.

Dr. Sloane (*Medical Gazette*, vol. xvii. p. 389) gives an

account of a man, 65 years of age, who was rescued from a coal-mine after he had been immured 23 days, during the first 10 of which he had a little muddy water. He was so much reduced that he died three days after.

In the same connection, the case of Elizabeth Woodcock * is worthy of record. She was buried in 1799 nearly eight days under snow, with no other nourishment than snow and snow-water, and her miraculous preservation is ascribed to "the great warmth and nutritious quality of the snow. Of this certain fact we are not without many astonishing and convincing proofs. That persons can subsist on snow and on water for many days is also evident, a remarkable instance of which occurred on Wednesday, November the 22nd, 1820. Some children, passing a dry well in a field, in the parish of Dodding-ton, heard a voice which much frightened them; on examination it was found to proceed from a young woman of the name of Cecilia Steers, who accidentally fell in on the eighth as she was going to Rodmersham to see her mother. The poor girl had nothing to live on the fifteen days and nights but a little snow-water, which she collected in a hole she made at the bottom of the well for that purpose. The well was thirty feet deep, and had been made for the purpose of obtaining chalk."

"Another instance is likewise on record of three women who survived after being buried thirty-seven days in the snow at Bergemoletto, in Italy, in the year 1765. This is attested by Mons. Lornis."

To the medical man the following histories will be especially interesting, both being well authenticated, and each possessing features which lend it importance in a physiological sense. These accounts are taken from the article "Abstinence," in Charles Knight's *English Cyclopædia*, 1859, the *Penny Cyclopædia*, 1833, having been laid under contribution for them:—

"The history of the Progressive Changes which take place in the system on the total abstraction of food, is illustrated in the most perfect manner by two cases which fell under the notice of physicians capable of accurately observing and duly appreciating each successive event.

"Many wonderful stories are on record by men whose veracity is beyond question, and who were endowed with more than ordinary discrimination and judgment. The record on this account is invaluable, while in itself it is highly curious and instructive.

"For the first case we are indebted to Dr. Currie of Liverpool. In August, 1795, a gentleman of Yorkshire, aged sixty-six, applied to this physician for his assistance, on account of

"Wonderful Characters." By Henry Wilson, 1826, vol. i. p. 383, Note.

an obstruction in his swallowing food, with which he had been afflicted for ten or twelve months. At first the complaint was slight; it occurred only when he attempted to swallow dry and hard substances; it afterwards extended to solids of every kind, and, at the time he was first seen by his physician, although he was still able to pass down liquids, the quantity he could swallow was not sufficient for his nutrition, and he was considerably reduced. On the introduction of a bougie into the gullet, it passed about two inches easily, but then met with an obstruction which, by a moderate pressure, was overcome. It then passed easily seven or eight inches more, but at the lower part of the tube, towards its termination in the cardia, it met with a firm resistance which no patience or skill could surmount. This obstruction proceeded from a scirrhus tumour, which, gradually increasing at first, diminished the passage, and at length closed it wholly. On the evening of the seventeenth of October, a sudden increase of the obstruction came on, and from this time he was able to swallow only a tablespoonful of liquid at a time, and at long intervals. It was with difficulty that he got down seven or eight spoonful of strong soup in the day, and this quantity gradually diminished. On the thirteenth day from this sudden increase of the obstruction, the passage appeared to be closed. The patient himself, to the last, was far from despairing of his recovery; and the affectionate friends around him, though they could not but see the issue of the case, yet desired that his life might be prolonged to the uttermost. The following plan was, therefore, adopted with this view. Every morning a clyster was administered, consisting of eight ounces of strong broth, made chiefly of the membranous parts of beef, those being considered the most nutritious, into which were rubbed two yolks of egg, and to which were added forty drops of laudanum. This was repeated in the afternoon, and again in the evening; previously to which, in the evening, he was placed up to the neck in a tepid bath, of which one-fourth was milk and the rest water; the whole quantity amounting to twenty-four gallons. The temperature was fixed at 96° , to accommodate his sensations, and the time of immersion was gradually prolonged from forty-five minutes to an hour.

“After a few days it was found that the retention of the rectum improved, so that the clysters were enlarged to ten ounces of broth, and three yolks of eggs each, to which were added eight ounces of white wine, and the laudanum, which was added to the evening clyster, was gradually increased from sixty to two hundred and fifty drops. Thus the whole of his nutriment for twenty-four hours consisted of thirty ounces of broth, twenty-four ounces of wine, nine yolks of eggs, and from 250 to

380 drops of laudanum, and administered by clyster, with what liquid might be supposed to be taken up in the bath by the absorbents of the surface of the body. When in tolerable health, at the commencement of his complaint, this gentleman, who was a tall man, and naturally corpulent, weighed 240 lbs. Before the obstruction had become complete, imperfect nutrition had reduced him to the weight of 179 lbs. In twenty days from the period of the sudden increase of the obstruction he was reduced to 154 lbs.; on the twenty-fourth day he had lost 5 lbs. more; and at the period when his delirium commenced, that is on the thirty-second day from the night that he ceased to swallow, he weighed 138 lbs., having lost upwards of 100 lbs. of his original weight. He lived four days longer, that is, thirty-six days from the period when the obstruction was supposed to be complete; but during these last four days no nutriment in any form, or of any kind, was administered; for the rectum no longer retained the clysters, and the administration of the bath appeared, under these circumstances, to be wholly useless.

“For a month after the total obstruction of the passage the temperature and the pulse were natural, but on the thirty-second day the pulse became small and frequent; on the following day the eyes lost their common direction, the axis of each being turned towards the nose; he complained that he sometimes saw double, but the sensibility of the retina was rather increased than diminished, for, on the admission of the light of the window, he screamed out, though he had before been accustomed to this light. On the next day there was considerable incoherence of mind; this incoherence passed rapidly into delirium, during the prevalence of which there was a perpetual and indistinct muttering, with great restlessness and agitation; the skin and the extremities were sometimes of a burning heat, and sometimes clammy and cold; the pulse became feeble and irregular; the respiration, which had been singularly undisturbed, became laborious, and in ninety-six hours after the clysters and all other means of nutrition had been abandoned he ceased to breathe.

“During the whole of this melancholy progress to inevitable death, this unfortunate gentleman complained very little of hunger; occasionally he expressed a wish that he could swallow, but not often nor anxiously; and when questioned on the subject of his appetite, he always declared that he had no hunger which occasioned any uneasiness. The clysters evidently relieved the sense of hunger, and the opium they contained seemed to have a powerful share in producing this relief. It occasioned quiet and rest after each clyster, and allayed every kind of desire or appetite. Neither was he much disturbed with thirst. This sensation

was, indeed, troublesome during the first days of his abstinence, but it abated, and, as he declared, was always removed by the tepid bath, in which he had the most grateful sensations. His spirits were uncommonly even, and his intellect perfectly sound. He occupied himself a good deal in his private concerns, and, as usual, interested himself in public affairs. In order to husband his strength he was confined a good deal to bed; but, till the last few days of his life, he dressed and undressed himself daily, and walked, not only about his room, but through the house. His nights were quiet; his sleep sound, and apparently refreshing. Just before his delirium set in he had very lively dreams, which were all of a pleasant nature, and, in the last conversation he had with his physician, he told him he had had a very gay evening with two Yorkshire baronets whom he named; that they had pushed the bottle about freely; that many jokes had passed, at the recollection of which he laughed heartily (a thing uncommon with him); but it was observable that he was unable, longer than a moment or two, to distinguish this scene which had passed in sleep from a real occurrence; and this state of mind lapsed into delirium, from which he never recovered. At this period he was so weak as to be scarcely able to turn himself in bed, to which he had been entirely confined several days previously to his death.

“The second case, which is no less interesting, occurred to Dr. Willan. It was that of a young man of studious and melancholic turn of mind, who, being affected with indigestion, undertook voluntarily to live without food. He drank nothing but water flavoured with a little orange-juice. He was seen by Dr. Willan on the sixty-first day of his fast. At that time he was emaciated to a most astonishing degree; the muscles of his face were entirely shrunk, his cheek-bones stood prominent and distinct, affording a most ghastly appearance; the abdomen was concave from the collapsed state of the intestines, the limbs were reduced to the greatest possible degree of tenuity, and the processes of their bones were easily distinguishable. His whole appearance suggested the idea of a skeleton prepared by drying the muscles upon it in their natural situations. His mind had become imbecile.

“Unfortunately the treatment adopted was injudicious, the quantity of food allowed him being much too large; yet for the first few days he appeared to improve, regaining flesh and strength and acquiring firmness, and even cheerfulness of mind; but on the night of the fifth day he was sleepless and restless; on the morning of the sixth he began to lose his recollection, and before midnight he was quite frantic and unmanageable. At the same time his pulse was increased in frequency, with con-

siderable heat of the skin and tremors. During the following day he continued raving and talking very incoherently, as he had done during the preceding night. He remained nearly in the same state, scarcely ever sleeping, and taking very little nourishment. His pulse became daily smaller and feebler, and beating at length 120 strokes in a minute, and his emaciation still increasing, until the eleventh day from the period that he began to take food and medicine and the seventy-second from the commencement of his abstinence, on which day he died, quite exhausted.

“There is no authentic case on record in which the duration of the abstinence was as long as this, and both these cases, taken together, afford an excellent history of the disorder of the functions and the exhaustion of the powers of life on the total and continued abstraction of food.

“The mind, in the first case, was naturally firm and strong ; in the second it was supported by an enthusiasm amounting to insanity.

“When the mind is feeble, and especially when it is under the influence of fear, anxiety, despondency, or any other depressing cause, the duration of life is greatly abridged. It is instructive to observe the absence of severe suffering from hunger and thirst ; the absence of all acrimony of the fluids ; the absence of all violence and turbulence of mind until delirium set in, the precursor of death.”

Though without the adjuncts of particular disease, the case of Henry Welby, narrated in “Wonderful Characters,” vol. i. pp. 148–51, bears, like the two preceding, on the facility with which vitality can be supported efficiently without the extensive variety of meats common to advanced civilisation :—

“In this gentleman we find a rare example of extraordinary abstinence and seclusion, in the midst of a gay and luxurious city. For the long period of forty-four years he withdrew himself from all society, and during that time never tasted either fish, flesh, or fowl, or any strong drink. An account of his remarkable life was published in 1637, the year after his death, under the title of *The Phœnix of these late times*. The noble and virtuous Henry Welby, a native of Lincolnshire, was born in 1552, and inherited a clear estate of more than £1,000 a year. He was regularly bred at the University, and studied some time in one of the Inns of Court. He afterwards spent several years in the Low Countries, Germany, France, and Spain. When he returned he settled on his paternal estate, and lived with great hospitality, respected by the rich, prayed for by the poor, and honoured and beloved by all. Here he married, and had a daughter, who was afterwards led to the hymeneal altar by Sir Christopher Hilliard, a baronet in Yorkshire.

“At the age of forty, a younger brother, with whom he had some difference of opinion, meeting him in the field, snapped a pistol at him, which fortunately, however, flashed in the pan. Thinking this was only done to frighten him, he coolly disarmed the ruffian, and, putting the weapon carelessly into his pocket, thoughtfully returned home. On examination, he discovered that the pistol was charged with more than one bullet, and this circumstance had such an effect on his mind, that he instantly formed the extraordinary resolution of retiring entirely from the world, in which he inflexibly persisted till the end of his life.

“In the year 1592 he accordingly came to London, and took a neat house at the lower end of Grub Street, near Cripplegate. This house he prepared for the purpose, and, contracting a numerous retinue into a small family, he selected three chambers for himself—one for eating, another for sleeping, and the other for a study. As they were one within another, while his repast was set on the table by an old maid, he retired into his bed-chamber; when his bed was making, into his study, till the rooms were clear. From these chambers he never issued till he was carried out, forty-four years afterwards, to his grave; during which time no person ever saw him, except his servant Elizabeth, and she only in cases of necessity, although she cleaned his rooms and provided his food.

“During the whole time of his retirement, his chief food was oatmeal gruel, or occasionally in summer a salad of cool herbs, or the yolk of an hen’s egg, but not the white, and what bread he ate he cut out of the middle, never tasting the crust. His constant drink was beer, excepting at times his servant Elizabeth fetched him some milk hot from the cow: yet he kept a bountiful table for his servants, and sufficient entertainment for any stranger or tenant who had business at his house. Every book that was printed was bought for him, but such as related to controversy he laid aside and never read.

“At Christmas, Easter, and other holidays he had all dishes in season provided and served up in his own chamber, when, having returned thanks to God, he would put a clean napkin before him, and, putting on a pair of white holland sleeves, which reached to his elbows, and cutting them up dish after dish, would send them to different poor neighbours, till the table was quite empty; and then, without tasting anything whatever himself, caused the cloth to be taken away. This formality he invariably practised, both dinner and supper, on those days. As he kept a kind of perpetual fast, he no doubt devoted himself to continual prayer, excepting what he dedicated to study, for he was both a scholar and a linguist, and left behind him some collections and translations of philosophy. When any person clamoured impu-

dently at the gate, they were not, on that account, immediately relieved; but when from his private chamber, which looked into the street, he perceived any sick, infirm, or lame, he sent after them with relief enough for several days. He likewise inquired what neighbours were industrious, and which had the largest families; and if their labour and industry could not abundantly supply their wants, he used liberally to relieve them according to their necessities.

"This singular, but benevolent and exemplary, character died while sitting in a chair, at his house in Grub Street, after a confinement of forty-four years, October the 29th, 1636, aged eighty-four years. At his death his hair and beard were so overgrown that he appeared rather like a hermit of the wilderness than the inhabitant of one of the first cities in the world. His remains were interred in St. Giles's Church, Cripplegate.

"The following lines are from the pen of the celebrated John Taylor, better known by the appellation of the Water Poet:—

Old Henry Welby, *well* be thou for ever,
 Thy purgatory's past, thy heaven ends never.
 Of eighty-four years life, full forty-four
 Men saw thee not, nor e'er shall see thee more;
 'Twas piety and patience caused thee
 So long a prisoner (to thyself) to be.
 Thy bounteous house, within, express'd thy mind;
 Thy charity, without, the poor did find.
 From wine thou wast a duteous *Rechabite*,
 And flesh so long time shunn'd thy appetite:
 Small beer, a candle, milk, or water gruel,
 Strengthen'd thy grace, maintain'd thy daily duel
 'Gainst the bewitching world, the flesh, and fiend,
 Which made thee live and die well.—There's an end."

The length of time during which the human being can live without food must always be an undecided matter. The varying need of different physiques imports an uncertainty into any consideration of the kind that will prevent a definite statement of a time within which all must succumb. The proof of this is quite unnecessary; but there can be no question that beyond a certain maximum, even under the most favourable circumstances, life with fasting cannot be prolonged. How long this time can be the above cases suggest; and a passage in the *Gentleman's Magazine*, 1854, vol. lxxiv. part ii. p. 1223, relating to "Captain David Woollard and four seamen, who lost their ship while in a boat at sea, and surrendered themselves up to the Malays in the Island of Celebes, contains an interesting account of their sufferings from hunger and various hardships, and their escape from the Malays, after a captivity of two years and a half; also an account of the

manners and country, and a description of the harbours and coast, &c.; together with an introduction and appendix, containing narratives of various escapes from shipwreck, under great hardships and abstinence, holding out a valuable seaman's guide, and the importance of union, confidence, and perseverance in the midst of distress," refers to the instance above mentioned of "a young man, driven almost to insanity by intense study, and supposed by Dr. Willan, who reports it, to be the longest instance recorded in the 'Annals of Physic'—61 days."*

There can be no question but that there is always floating in the atmosphere an amount of matter, organic and inorganic, sufficient to go some way towards restoring the small loss undergone by a fasting body in repose. The proof of this has been frequent and complete for short periods, and innumerable statements on the subject are to be found scattered throughout literary works and periodicals. Many of them, it must be said, require to be taken with more than a single *granum salis*, but they deserve some notice. The following, in addition to those already quoted, are a considerable number of these fragmentary excerpts:—

Pliny.—A person may live seven days without any food whatever; and many people have continued more than eleven days without either food or drink.—*Hist. Nat.*, lib. ii. c. 54.

Petrus de Albano.—There was in his time in Normandy a woman thirty years of age, who had lived without food for eighteen years.—*Exposit. Ult.*, prob. x.

Alexander Benedictus mentions a person at Venice who lived forty-six days without food.—*Pract.*, lib. xii. c. 11.

Toubertus relates that a woman lived in good health three years without either food or drink; and that he saw another who lived to her tenth year without food or drink, and that when she arrived at a proper age she was married, and lived like other people in respect to diet, and had children.—*Decad.* i., paradox 2.

Clausius et Garcia ab Horto mention that some of the more rigid Banians in India abstain from food frequently for twenty days together.—*Hist. Arom.*, lib. i.

Albertus Krantzius says that a hermit in the mountains in the canton of Schwitz lived twenty years without food.—*Hist. Eccles.*, lib. xii. c. 21.

Ganguinus.—Louis the Pious, Emperor and King of France,

* Dr. Willan's account gives 72 days as the period during which his patient lived from the beginning of the fast—but food was taken the last 11 days.

who died in 840, existed the last forty days of his life without food or drink.—*Hist. Franc.*, lib. v.

Citois gives the history of a girl at Confoulens, in Poitou, who lived three years without food.—*Abstin. Confolentan.*

Albertus Magnus saw a woman at Cologne who often lived twenty, and sometimes thirty, days without food; and that he saw a hypochondriacal man, who lived without food for seven weeks, drinking only a draught of water every other day.—*De Animalibus*, lib. vii.

Hildanus records the case of a girl who lived many years without food or drink. This subject, he says, had the abdomen wasted and retracted towards the spine, but without any hardness. She did not void any urine or fæces by the bowels.—*Cent. V. Obs. Chirurg.* 33.

“Pennant gives an account of a woman in Ross-shire, who lived a year and three-quarters without meat or drink. This astonishing circumstance is outdone by a book printed in London, 1611, which gives a narrative of Mrs. Eve Fleigan, who lived after the manner of the Astomi (people without mouths), who lived on the smell of flowers, according to Pliny’s history of them.

This maid of Meurs thirty and six years spent,
Fourteen of which she took no nourishment;
Thus, pale and wan, she sit sad and alone,
A garden’s all she loves to look upon.”—*Newspaper paragraph.*

“In the year 1724, John Ferguson, of Killmelford, in Argyle-shire, overheated himself in the pursuit of cattle on the mountains, then drank largely of cold water and fell asleep. He slept for four-and-twenty hours, and waked in a high fever; ever since his stomach loathed, and could retain no kind of aliment but water. A neighbouring gentleman (Mr. Campbell), to whom his father was tenant, locked him up for twenty days, supplying him daily with water, and taking care that he should have no other food; but it made no difference either in his look or strength. At the age of thirty-six (when the account was sent to the Philosophical Society) he was of a fresh complexion, and as strong as any common man.”—*Phil. Trans.*, vol. xlii. page 240.

“The records of the Tower mention a Scotchman imprisoned for felony, and strictly watched in that fortress for six weeks, in all which time he took not the least sustenance, for which he had his pardon.”—*Encyclopædia Londoniensis.*

William Lithgow says, in his “Nineteen Years’ Travels and Adventures in Europe, Asia, and Africa,” that “After ten days’ feasting,” his associate and he “set forward for Switzerland.

In the canton of Bern, near to Urbs, they went to see a young woman who, for thirteen years, had neither eat, drank, nor excremented, as was vouched by her friends, physicians, &c. She was always 'bed-fast,' and reduced to sinews, skin, and bones. The year after she recovered her natural strength and appetite, married, had two children, and died in the fifth year."—*Gentleman's Magazine*, 1775, vol. xlv. p. 518.

Sylvius asserts of a young woman in Spain, aged twenty-two years, that she never ate any food, but lived entirely on water; and that there was a girl in Narbonne, and another in Germany, who lived three years in good health without any kind of food or drink.—*Consil. Adver. Famem.*

It is said that Democritus lived to the age of 109 years, and that, in the latter part of his life, he subsisted almost entirely, for forty days at one time (according to some writers), on smelling honey and hot bread.

For catalepsy and mania a very rigid abstinence may be borne for a considerable period.—See *Dublin Hospital Reports*, vol. i. p. 159; *Phil. Trans.* vol. xiv. p. 577; *Mémoires de Toulouse*, l'an 1788.

Raulin mentions a case of fasting of fifty-two days, water alone being drunk during the time.—*Observations des Médecines*, p. 270.

Dr. Willan attended a patient who had fasted sixty-one days, with the exception of drinking from half-a-pint to a pint of water daily, mixed with a very small quantity of orange-juice, two oranges lasting him for a week, without any employment of the pulp.*—*Medical Communications*, vol. ii.

Dr. John Mason Good has given several of these histories at some length in the running Commentary to the volume on "Nosology." See also *Mém. de l'Acad. des Sciences*, l'an 1764; *Stalpart Van der Wiel*, *Observ. Rar. Mem. of the Lit. and Phil. Soc. of Manchester*, vol. ii. p. 467; and two extraordinary cases of fasting quoted in the *Medical Gazette* for July 1833. In one of these instances, the patient is stated to have been living six years and a half without swallowing any food, though she moistened her mouth occasionally with water, tea, or whey, which she invariably spat out again. During four years she had relief only once by stool, and three times by urine. At the age of thirty-five the catamenia ceased altogether. In the other case, originally published by Professor Ricei of Turin, the inability to take food continued about three years; and on the death of the patient, who was also a female, the descending colon and commencement of the rectum were found so obstructed

* *Vide* pp. 259 and 263.

by the effects of chronic inflammation that no solid matters could pass along them.*

There are many traditions, in all national histories, relating to the means of sustaining life resorted to, under circumstances of danger and trial; and travellers recount the marvellous enduring powers of Indians and others. These stories have often been made use of by physiologists, particularly those writers of former generations who addressed themselves to popular readers. Dr. Paris, for instance, in his "Treatise on Diet," p. 78, says:—

"Whenever the Indians of Asia and America undertake a long journey, and are likely to be destitute of provisions, they mix the juice of tobacco with powdered shells, in the form of small balls, which they retain in their mouths, the gradual solution of which serves to counteract the uneasy craving of the stomach. In like manner we may explain the operation of spirit in taking away the appetite of those who are not accustomed to it, whilst those who indulge the habit receive its stimulant without its narcotic impression."

The Welsh Fasting Girl and her imitators were not the first to adopt this means of attracting attention to themselves, as the succeeding narrative will prove:—

"In a former visit to this place (Barmouth), July 18, 1770, my curiosity," says Pennant,† "was excited to examine into the truth of a surprising relation of a woman in the parish of Cylyniz, who had fasted a most supernatural length of time. I took boat, had a most pleasant passage up the harbour, charmed with the beauty of the shores, intermixed with woods, verdant pastures, and corn-fields. I landed, and, after a short walk, found in a farm, called Tydden Bach, the object of my *excursion*, Mary Thomas, who was boarded here, and kept with great humanity and neatness. She was of the age of forty-seven, of a good countenance, very pale, thin, but not so much emaciated as might be expected from the strangeness of the circumstances I am going to relate. Her eyes weak, her voice low, deprived of the use of her lower extremities, and quite bed-ridden; her pulse rather strong, her intellects clear and sensible. On examining her, she informed me that at the age of seven she had some eruptions, like the measles, which grew confluent and universal; and she became so sore that she could not bear the least touch; she received some ease by the application of a sheep's skin, just taken from the animal. After this she was seized, at spring and fall, with swellings and inflammations,

* *The Study of Medicine*, by J. M. Good, M.D., &c.

† *Journey to Snowdon*, ii. 105-107.

during which time she was confined to her bed; but in the intervals could walk about, and once went to Holywell in hopes of cure.

“When she was about twenty-seven years of age she was attacked with the same complaint, but in a more violent manner, and during two years and a half remained insensible, and took no manner of nourishment, notwithstanding her friends forced open her mouth with a spoon to get something down; but the moment the spoon was taken away, her teeth met, and closed with snapping and violence; during that time she flung up vast quantities of blood.

“She well remembers the return of her senses, and her knowledge of everybody about her. She thought she had slept but a night, and asked her mother whether she had given her anything the day before, for she found herself very hungry. Meat was brought to her, but, so far from being able to take anything solid, she could scarcely swallow a spoonful of thin whey.

“From this she continued seven years and a half without any food or liquid, except sufficient of the latter to moisten her lips. At the end of this period she again fancied herself hungry, and desired an egg, of which she got down the quantity of a nut kernel. About this time she requested to receive the sacrament, which she did, by having a crumb of bread steeped in the wine. She at this time, for her daily subsistence, eats a bit of bread weighing about two pennyweights seven grains, and drinks a wine-glass of water, sometimes a spoonful of wine, but frequently abstains whole days from food and liquids.

“She sleeps very indifferently: the ordinary functions of nature are very small, and very seldom performed. Her attendant told me that her disposition of mind was mild, her temper even; that she was very religious, and very fervent in prayer—the natural effect of the state of her body, long unembarrassed with the grossness of food, and a constant alienation of thought from all worldly affairs.”

The startling case of a girl near Osnabruck is thus recorded by the *Encyclopædia Metropolitana*, vol. xiv., art. “Abstinence”:—

“A country girl, sixteen years old, in a village near Osnabruck, had enjoyed a good state of health during her childhood; and at about ten years of age she was seized with epileptic fits, against which a number of remedies were employed in vain. Since that time she was mostly confined to her bed, particularly in winter, but in summer she found herself a little better. From February, 1798, the alvine and urinary excretions began to cease, though she took now and then a little nourishment; but from the beginning of April of the same year, she abstained entirely from all food and drink, falling into an uninterrupted slumber,

almost senseless, from which she only awoke from time to time for a few hours. The sensibility during the time was so great that the slightest touch on any part of the body brought on partial convulsive motions. In this state she had continued for nearly ten months, when Dr. Schmidtman saw her first in March 1799. Though she had not taken the least nourishment during all this time, Dr. Schmidtman found her, to his utmost astonishment, fresh and blooming.

“For the last two months only the intervals of sleep began to be longer; her senses of sight and hearing were in perfect order, but her feeling she seemed to have quite lost, as she could suffer pinching of the arms and legs without pain; her gums bled frequently, and the pulse was scarcely perceptible in the arms, but beat strong and full in the carotids—about 120 in a minute. Dr. Schmidtman attempted to make her drink a little milk, but she protested she could not swallow it. The alvine and urinary excretions had quite ceased.

“Although there could hardly be a suspicion of any kind of imposition, the parents being honest people, yet, to remove all doubt, six sworn men were appointed from different places in the neighbourhood to watch her day and night, and instructions given to them accordingly. This being continued for a fortnight, the men were dismissed, having given evidence upon oath that the patient had never taken any food or drink whatever during that time, nor had any excrement, alvine or urinary. She had been once very ill, and nearly dying, seized with convulsions, feverish, and sometimes in a great sweat, which had the extraordinary property of turning water black. When Dr. Schmidtman saw her again, he found her quite recovered, not in the least emaciated, but rather looking lustier; her gums, however, still frequently bled, and her feeling was not yet returned, but her memory was not impaired, and she amused herself sometimes with reading and writing. No alvine or urinary excretions had taken place. Sometimes she was attacked with a sudden weakness, particularly after having bled from the mouth. During the last severe winter she could not endure the heat of the stove, because she felt then faint and oppressed.

“Dr. Schmidtman then enters into an inquiry by what means the patient in this case was nourished and maintained in that state in which she was found, and, having discussed the matter at large, he is of opinion that she drew, by resorption, such elementary particles from the atmosphere as were sufficient for the nutrition of the body, and that the excretions were likewise replaced by the skin.”

In the manuscript department of the British Museum, there is a quaint description of the fasting of Jane Hodge (Sloane MS. 4811), of which the following is a verbatim copy:—

“To the Rt. Honble. the Ld. Viscount Mountjoy.
At his house in Dublin.”

“I have enclos'd sent you an acct. of one Jane Hodge as near as I can; When she first fell into this melancholy she was about 36 years of age, she lived with a sister of her owne in the same Towne with me about the beginning of Nov: 1669 she went about a mile from her Sister's house on a Saturday and return'd the Munday following; when She came back She would not Speak to any body, she continued so till towards Christmas. Her relations took advice of one Gray a Physician and some other Doctors, who advis'd she should be Stript and severely whipt, if she wou'd not Speak, which was accordingly done, but all to noe purpose. She never moved her countenance at all the ill usage She gott, nor never spoke a word to them. She continued Silent till the beginning of ffeb. but eat something all this while. about the 5th of ffebe. She quitted meat altogether, and kept her bed: Sometimes when she found the house quiet She would rise and walk about. This Acct. I had from her Sister and people that lived in the house with her: I living so near her went sometimes once a day and sometimes oft'ner to see her; and least She shou'd rise in the night and take meat She was put into a wast house, where there was a close Roome, where She continued from about the 10th of Aprile untill near midsummer following. Sometimes at night I have known her Sister to have left meat by her to try if she wou'd eat, and have seen it taken up the next morning untouch't, all the time she lay in the wast house She neither tasted meat nor drink, which was about 9 weeks; and her Sister and people of the house say; She was 9 weeks before She was clos'd up, that She neither eat nor drank. I saw her when She was put up in the wast house, and all that time you might See all the joynts of her back better, and fuller all her belly than back; the skin of her belly was clapt as close to her back as ever I Saw a carpet to a table. All the time She lay in the wast house She was never known to Voide Nature either one way or other; her eyes Stood in her head, Sometime you might observe them move, but very Seldome. There was a young man came to my house, and hearing of her desired to See her, I went along with him and when we came where She was; we Spoke to her, and threat'ned if She would not Speak to burn her; She took noe notice of us. I desired her Sister to put some Cloaths on her, and we wou'd either torment her or make her speak. Whilst her Sister was putting on some Cloath we made a fire, when she was brought thereto, Sometimes we threat'ned her, and offered to throw her in, and att other times

gave her good words; but she took noe notice of us. After we had tormented her by putting her hands on fiery coals, and heated the Tongs, and Straining open her mouth, and threat'ning to run them down her throat, She never Spoke a word, but Stooped Suddenly down & took a great part of the fire in her arms and cast upon us. we took her just then to Ardstraw Bridge, and hung her over the bridge by her arms a good while, She never took notice of us! when we Saw that wou'd not doe we carried her to a poole of water and cast her in as we coud; She came padling to the Shore; this we did 3 times after other, and the 3d time She was almost quite Spent. after this she had lyn a little on the Shore, She looked up and all we coud force her to, She told us we were a couple of wicked Spirits, when she was carried home, before we put her in the wast house, we tooke a great heap of Straw, and made a ring of it, and sett her in the middle of it, and fire to it in several places; She was noe more concern'd than those that looked on. I believe She wou'd have Suffered herself to dye in the fire had She not been pulled out. Before she quitt Eating She often Spake of one Capt Tho Stewart, and the first meat She Eat was from him. When he came to the house where she lay I was along with him, he asked her how She did (her back was to him and she turned her in the Bed, and She made answer that She was well, he asked her if she woud eat any thing; She said She wou'd eat from him, he caused to gett some meat, and She eat a little heartily, and wou'd have eaten more, had she not been prevented; Capt. Stewart then Spoke to her, and desired to know the cause of her fast. She desired the house Shou'd be cleared, and She wou'd Speak to him. wee all went oute; She then desired She Shou'd be carried to Newtown Stewart, and She wou'd discover it there. all She Said was that She fasted for the Sins of the people, and that She was the Saviour of the Nations. There was noe notice to be taken of anything She Said: She recovered Strength very soon, She continues very Melancholy Still. I have often come unawares and fired a gun, and She wou'd never look about her. She cares not for Staying long in one place Since. There are Severall that can give an account of these things, and many Ministers both Episcopall and Presbyterian, but particularly the Presbyterians; for She was much inclin'd that way. I believe this will tyre you before you read it. I am my Ld

“Yr Lps Humble Servt

“Causland.”

“Gilbert Jackson, of Carse Grange, Scotland, about fifteen years of age, in February 1716, was seized with a violent fever,

which returned in April for three weeks, and again on the 10th of June; he then lost his speech, his stomach, and the use of his limbs, and could not be persuaded to eat or drink anything. May 29th, 1717, his fever left him, but he was still deprived of speech and the use of his limbs, and took no food whatever. June 30th he was seized with a fever again, and the next day recovered his speech, but without eating or drinking, or the use of his limbs. On the 11th of October he recovered his health, with the use of one of his legs, but neither ate nor drank—only sometimes washed his mouth with water. On the 18th of June, 1718, the fever returned and lasted till September: he then recovered, and continued in pretty good health, and fresh coloured, but took no kind of meat or drink. On the 6th of June, 1719, he was again seized with a severe fever. On the 10th, at night, his father prevailed upon him to take a spoonful of milk boiled with oatmeal: it stuck so long in his throat that his friends feared he had been choked; but ever since that time he took food, though so little that a halfpenny loaf served him for eight days. All the time he fasted he had no evacuation; and it was fourteen days after he began to eat before he had any: he still continued in pretty good health.”

Of a date late enough to be remembered by most readers is the case of the Fasting Girl in Lancashire, Ellen Sudworth, concerning whom Dr. R. Sephton, of Culcheth, says*: “I was first called to see Ellen Sudworth, a girl aged eleven years, who resides with her parents about a mile from my house, on January 4th, 1870, and I had her under treatment for febricula and debility until March of the same year.

“After her recovery from this attack, she never seemed entirely to regain her usual spirits. When at school she was observed to mope, and in the family circle she never played or ran about as other children do.

“She continued in this state for some time; and early in June, 1871, I was again called in to attend her, and I then found her very low and weak, complaining of pain in the head of a throbbing character, which she likened to ‘the dropping of water on a stone.’ This headache and prostration continued for about six weeks, when she gradually lost her voice and expressed her feelings by signs; from this time she has never spoken until about ten weeks ago, when she suddenly exclaimed that something had burst in her head, and she felt afterwards able to speak. For two months prior to this recovery of speech, she did not open her eyes, and her parents state that blood frequently flowed from between her eyelids and from her mouth, but this I never saw, although I have examined her eyes

* *British Medical Journal*, 1876, i. 329.

and mouth frequently, and always found the mucous membrane pale, and the conjunctiva free from congestion. During the whole of this period, since July 1871, she has not partaken of any solid food, but has been supported with soups and milk puddings; therefore this case ought not to be called one of fasting. During the past five years she has been confined to her bed, except occasionally being carried to the couch. I have always considered this extraordinary case to be one of hysteria, only requiring moral treatment and discipline to effect a cure; and I am led to this conclusion by the absence of any disease to account for her peculiar symptoms. When I saw her in June, 1871, there was no increase of temperature either of the head or body; the pupils active, the tongue moist and clean, the stomach and bowels healthy, all the excretions normal; the pulse regular, full, slow, but weak. The catamenia commenced about two years ago, and have been (with one or two exceptions) perfectly regular and healthy. The respiration has generally been free, full, and regular—although, at times, it appeared almost to cease, and was then performed very slowly. The girl now, although very pale, is not half so emaciated as would be expected, after being in bed for so long a period. The only point of interest in this case is the persistency with which she has kept up this state, there not being any inducement for her to do so, as her condition was unknown to any except those in the immediate neighbourhood." Dr. Sephton is evidently correct in treating this as a case of early and pronounced hysteria, to which class nearly all similar cases have been found to belong.

Among insane patients, refusal to take bodily nourishment is a common occurrence, and has to be met with prompt adoption of coercive measures. All disorders of the nervous system, and particularly those implicating the intelligence, have a damaging influence upon the functions of *nutrition*. In cases of simple anxiety of mind, how often do we observe the general health to become seriously impaired, and the assimilative powers to be completely paralysed! In the incipient stage of insanity the nutritive functions appear occasionally altogether suspended. The patient, long before attention is called to the state of the mind, loses flesh, and is occasionally reduced to a dangerous state of emaciation and inanition.

"The refusal to take nourishment," says M. Morel, "often depends upon a disordered condition of the digestive organs. The truly wonderful obstinacy with which certain insane persons refuse food is, however, most commonly caused by their delirious ideas, such as a fear of poison, and a desire to die of hunger, in obedience to an order given them by a superior power." M. Morel relates the case of a lady whom he had to

feed for several weeks by means of the stomach-pump, who refused to eat voluntarily, under the influence of an illusion that the food placed before her was composed of the flesh of her murdered children! Some insane patients complain of a fire that devours them, and sometimes of an icy coldness which paralyses the peristaltic action. They are subject to borborygmus and flatulence. All the phenomena that men enjoying their reason bring easily to a right interpretation, become among hypochondriacs the starting-point of most strange illusions. They have in their intestines unclean animals, who gnaw them; some even pretend to have neither stomach nor intestines. It seems to them that all they eat falls down a bottomless gulf. One patient imagines that she ought no longer to eat or speak. Her body no longer exists—it is one composed of shapeless fragments, which have no cohesion among them. Also her clothes are not attached to her person, and she constantly experiences a most painful sensation for a modest woman—she believes that she is going to be exposed naked to public view.* The presence of worms in the stomach and intestines often creates an uncontrollable indisposition for food. Chronic inflammation, and sometimes ulceration of the bowels, have been known to produce analogous symptoms. The appetite is frequently seriously vitiated and depraved. In these cases the patient has a morbid craving, and never-satisfied desire for food. After eating an enormous meal he will emphatically declare that he has been starved, or had supplied to him either the minimum amount of nutriment, or no food at all! A vitiation of the appetite is shown by the patient eating with an apparent relish, or at least indifference, the most repulsive and disgusting matters. The sense of taste in these cases occasionally appears to be paralysed. In the incipient stage of insanity the assimilative functions are often seriously disordered. Hence the emaciation so often observed to accompany not only the commencement of insanity, but of various organic diseases of the brain, uncomplicated with aberration of mind.

Dr. Brierre de Boismont says in his article “On the Treatment of Melancholia, or Lypemania,” published in this journal,† that “the refusal of food may sometimes depend upon separation from the domestic circle. In two cases, in which this cause was clearly proved to me to exist, I sent away the patients to their homes, and this course was attended with success. In another case, after improvement for a few days, death super-

* Morel.

† New Series, vol. i. pp. 35, 36.

vened. It happens, on the other hand, that melancholic patients, who would not take any food from the hands of their relatives, take it when they are sent to an asylum, and the apprehensions they entertained then disappear. A young man from the provinces, who had abstained from every kind of food for five days, sat down to table as soon as he came to the asylum, and at the end of ten days he completely recovered.

“A happy thought, as I have already observed, may be sufficient to overcome this obstinate refusal of food. A patient presenting symptoms of imbecility, and who had not spoken for three or four months, suddenly ceased to eat, and this abstinence was prolonged for six days. This case occurred at the beginning of my career, and the family, being alarmed, requested me to call in Esquirol in consultation. This distinguished physician prescribed some medicine, but especially recommended that the patient should be immediately taken into the country, in order to divert his ideas. It was six o'clock, and I had a few friends to dinner. We sat down to table, and I took it into my head to have the patient brought in. At the sight of more numerous dishes, and food more delicately prepared than usual, he smiled, took what was offered to him, and ate with a good appetite. The crisis was over, and did not re-appear. What is most surprising is, that this patient, whom we had believed to be imbecile, was restored to reason several years afterwards.”

Erasmus Darwin relates in “*Zoonomia*” that “a clergyman about forty years of age, who was rather a weak man, happened to be drinking wine in jocular company, and by accident swallowed part of the seal of a letter which he had just then received. One of his companions, seeing him alarmed, cried out in humour, ‘It will seal your bowels up.’ He became melancholy from that instant, and in a day or two refused to swallow any kind of nourishment. On being pressed to give a reason for this refusal, he answered he knew nothing would pass through him. A cathartic was given, which produced a great many evacuations, but he still persisted that nothing passed through him; and though he was frightened into taking a little broth once or twice by threats, yet he soon ceased entirely to swallow anything, and died in consequence of this insane idea.” And that “Miss —, a sensible and ingenious lady, about thirty, said she had seen an angel, who told her that she need not eat, though all others were under the necessity of supporting their earthly existence by food. After fruitless persuasions to take food, she starved herself to death. It was proposed to send an angel of a higher order to tell her that now she must begin to eat and drink again, but it was not put into execution.”—*Zoonomia*, by Erasmus Darwin, 3rd ed., vol. iv. page 66.

“A French officer of infantry, who had retired from the service and become deranged, took it into his head to refuse food, and continued in that determination from the 25th of December till the 9th of February, drinking only about a pint and a half of water daily, with a few drops of aniseed-liquor in each glass, till the thirty-ninth day, from which time till the forty-seventh day he took nothing whatever. Till the thirty-eight day, too, he remained out of bed, but weakness at length obliged him to lie down. The return to food was followed by a temporary cure of his insanity.”—From the *Hist. de l'Academie des Sciences*, 1769, p. 45.

The influence of diet on the life of the individual is one, the importance of which needs no enforcing; but it is not always that the full force of the relation between food and health is perceived. Most people are willing to admit the advantage of an abstemious régime while failing to observe it. The efficacy of it in promoting longevity rests, however, on incontrovertible authority. Some of those we have collected may not be wholly trustworthy, but, even in our own day, instances of long lives, and healthy ones, reached by the simple-faring inhabitant of country districts, are numerous enough to be received without doubt.

According to Virgil, Dido gives Æneas and his companions a most splendid entertainment, as far as numerous attendants constitute one; but the poet mentions nothing that the heroes had to eat except *bread*; whatever else was got for them he includes in the general term *Dapes*, which, in other parts of the *Æneid*, is applied to all the coarse fare already mentioned. As the luxury of mankind increased, their lives shortened. The half of *Abraham's* age became regarded as a stretch, far beyond the customary period. So in profane history we find that when the arts of luxury were unknown in *Rome*, its seven kings reigned a longer term than afterwards, upon the prevalency of those arts, was completed by its first twenty emperors. Such persons, indeed, among the ancients, whose precepts and practice most recommended temperance in diet, were eminent instances of the benefit accruing from it, in the health preserved and long life attained by it.

Gorgias lived 107 years. Hippocrates reached, according to some writers, his 109th. Pythagoras, of whom it was observed that he was never known to eat to satiety, lived to near 100 years—if Iambicus may be credited; D. Laertius says that, according to most writers, he was, when he lost his life, in his 90th year. Out of his school came Empedocles, who lived, as some say, to 109; and Xenophilus, who lived to above 105. Zeno lived to 98; his disciple and successor, Cleanthes, to 99. Diogenes, when he died, was about 90. Plato reached his 81st

year, and his follower, Xenocrates, his 84th. Lycurgus, the lawgiver of the Lacedæmonians, who, when they obeyed their laws, were not less distinguished by their abstemiousness than by their fortitude, lived to 85; and their king Agesilaus* took pay of Tachos at 80; afterwards assisted Nectanebos; and, having established him in his kingdom, died, on his return to Sparta, at 84. Cato, the Censor, is introduced by Tully representing himself as, when in his 84th † year, able to assist in the Senate, to speak in the assembly of the people, and to give his friends and dependents the assistance which they might want from him.

Lucian introduces his account of long-lived persons with the observation that it might be of use as showing that they who took the most care of their bodies and minds lived the longest and enjoyed the best health. To come nearer to our own times: the discovery of a new world has confirmed the observations furnished by the old, that in those countries where the greatest simplicity of diet has been used, the greatest length of life has been attained.

Of the ancient inhabitants of Virginia we are told “that their chief dish was maize, and that they drank only water: that their diseases were few, and chiefly proceeded from excessive heats or colds. Some of them lived to upwards of 200 years.”—(Purchas, Samuel), his *Pilgrims*, vol. v. p. 946.

“The sobriety of the ancient inhabitants of Florida lengthened their lives in such sort that one of their kings, says Morgues, told me he was three hundred years old, and his father, whom he then showed me alive, was fifty years older than himself.” (*Ibid.*, vol. v. p. 961.) And if we now search after particular instances of persons reaching to extreme old age, it is certain that we must not resort for them to courts and palaces, to the dwellings of the great or the wealthy, but to the cells of the religious, or to cottages—to the habitations of such whose hunger is their sauce and to whom a wholesome meal is a sufficiently delicate one.

“Martha Waterhouse, of the township of North Bierley, in Yorkshire, died about the year 1711 in the 104th year of her age. Her maiden sister, Hester Fager, of the same place, died in 1713, in the 107th year of her age. They had both of them *relief* from the township of Bierley nigh fifty years.”—*Abridgment of Philosophical Transactions*, by Jones, vol. ii. p. 115.

T. Parr.—“Dr. Harvey, in his ‘Anatomical Account of

* *Plutarch*, vol. i. 596. See also p. 616.

† *De Senectute*, s. 10.

T. Parr,' who died in the 153rd year of his age, says that if he had not changed his diet and air, he might perhaps have lived a good while longer. His diet was old cheese, milk, coarse bread, small beer, and whey."

Hy. Jenkins.—Dr. T. Robinson says of H. Jenkins, the fisherman, "who lived 169 years, that his diet was coarse and sour."

Dr. M. Lister, having mentioned several old persons of Craven, in Yorkshire, says: "The food of all this mountainous country is exceeding coarse."—*Abridgment of Philosophical Transactions*, by Lowthorp, vol. iii. p. 307, &c.

Plutarch mentions our countrymen as in his time growing old at 120. To account for this, as he does, from their climate, seems less rational than to ascribe it to their way of living as related by Diodorus Siculus, who tells us that their diet was simple, and that they were utter strangers to the delicate fare of the wealthy.

Stobæus calls drunkenness "the study of madness," and Seneca, "Nihil aliud est ebrietas quam voluntaria insania," or "inebriety is nothing else but voluntary insanity."

"Buchanan writes that one Lawrence preserved himself to 140 by force of temperance and labour; and Spotswood mentions one Kentigera, afterwards called St. Mongah or Mungo, who lived to 185 by the same means."—*Wilkes's Encyclopædia Londoniensis*, art. "Abstinence."

The *Oxford Cyclopædia* remarks:—

"It is indeed surprising to what a great age the primitive Christians of the East, who retired from the persecutions into the deserts of Arabia and Egypt, lived healthful and cheerful, on a very little food.

"Cassain assures us that the common rate for twenty-four hours was 12 ounces of bread and pure water: with such frugal fare St. Anthony lived 105 years, James the Hermit 104, Arsenius, tutor of the Emperor Arcadius, 120, St. Epiphanius 115, Simon the Stylite 112, and Ronauld 120."

Swift indicates approval of abstinence in the following epigram from the French on

RELIGIOUS FASTING:—

Who can believe with common sense,
A bacon slice gives God offence;
Or, how a herring hath a charm
Almighty vengeance to disarm?
Wrapt up in majesty divine.
Does He regard on what we dine?

On the same subject these verses were written by Skelton, poet-laureat to Henry VIII., and who is styled by Erasmus the 'light and ornament of English scholars:—

Men call you therefore profanes,
 Ye picke no shrympes, nor pranes,
 Salt fish, stock-fish, nor herring,
 It is not for your wearing,

Nor in holy Lenton season,
 Ye will neither beanes ne peason ;
 But ye look to be let loose
 To a pygge or to a goose.

Moderation is a term which will never receive a definition unanimously approved. It was certainly not so at the time when the Fat and Lean Clubs were instituted and in force, as thus described in the ninth number of the *Spectator* :—

“The room where the *fat* club met was something of the largest, and had two entrances—the one by a door of moderate size, and the other by a pair of folding-doors. If a candidate for this corpulent club could make his entrance through the first, he was looked upon as unqualified ; but if he stuck in the passage, and could not force his way through it, the folding-doors were immediately thrown open for his reception, and he was saluted as a brother. I have heard that this club, though it consisted but of fifteen persons, weighed above three ton. In opposition to this society, there sprung up another, composed of scarecrows and skeletons, who, being very meagre and envious, did all they could to thwart the designs of their bulky brethren, whom they represented as men of dangerous principles ; till at length they worked them out of the favour of the people, and consequently out of the magistracy. These factions tore the corporation in pieces for several years ; at last they came to this accommodation : that the two bailiffs of the town should be annually chosen out of the two clubs, by which means the principal magistrates are, at this day, coupled like rabbits—one fat and one thin.”

Dr. Erasmus Darwin was quick to perceive the injurious effects produced by excess in either direction, and thus wrote :—

“It is curious, and it is highly important to bear in mind, that abstinence and excess produce symptoms so nearly alike, that it requires the utmost care and sagacity on the part of the physician to distinguish the one case from the other ; and as the one requires opposite remedies from the other, a mistake may be fatal, and must be injurious.”

Of “Anorexia,” or Want of Appetite, he observes : “Some elderly people, and those debilitated by fermented liquors, are liable to lose their appetite for animal food, which is probably in part owing to the deficiency of gastric acid, as well as to the general decay of the system. Elderly people will go on years without animal food ; but inebriates soon sink when their digestion

becomes so far impaired. Want of appetite is sometimes produced by the putrid matter from many decaying teeth being perpetually mixed with the saliva, and thence affecting the organs of taste, and greatly injuring the digestion.* All the strength we possess is ultimately derived from the food which we are able to digest; whence a total debility of the system frequently follows the want of appetite, and of the power of digestion. Some young ladies I have observed to fall into this general debility, but so as but just to be able to walk about, which I have sometimes ascribed to their voluntary fasting, when they believed themselves too plump; and who have thus lost both health and beauty by too great abstinence, which could never be restored. I have seen other cases of what may be termed *anorexia epileptica*, in which a total loss of appetite and of the power of digestion suddenly occurred, along with epileptic fits. Miss B., a girl about eighteen, apparently very healthy and rather plump, was seized with fits, which were at first called hysterical; they occurred at the end of menstruation, and returned very frequently, with total loss of appetite. She was relieved by venesection, blisters, and opiates; her strength diminished, and after some returns of the fits, she took to her bed, and has survived fifteen or twenty years; she has in general eaten half a potato a day, and seldom speaks, but retains her senses, and had many years occasional returns of convulsion. I have seen two similar cases, where the anorexia or want of appetite was in less degree, and but just so much food could be digested as supplied them with sufficient strength to keep from the bed or sofa for half a day. As well as I can recollect, all these patients were attended with weak pulse and cold, pale skin, and received benefit by opium, from a quarter of a grain to a grain, four times a day."

The effect of diet is markedly shown in the following extract from the *English Cyclopædia*, 1859:—

"Some time ago an alarming epidemic broke out in the Millbank Penitentiary, London. The prisoners confined in this prison were suddenly put upon a diet from which animal food was almost entirely excluded. An ox's head, the meat of which weighs eight pounds, was made into soup for one hundred people, which allows one ounce and a quarter of meat to each person. The prisoners were at the same time subjected to a low degree of temperature, to considerable exertion, and were confined within the walls of a prison situated in the midst of a marsh, which is below the level of the adjoining river. The consequences were, first, loss of colour, of flesh, and of strength;

* Here follow Dr. Darwin's prescriptions—one of which is the bile of an ox inspissated and made into pills, 20 grains to be taken before dinner and supper.

next this simple debility of constitution was succeeded by various forms of disease—scurvy, dysentery, diarrhœa, low fever; and, lastly, affections of the brain and nervous system—namely, headache, vertigo, delirium, convulsions, apoplexy, and even mania. When bleeding was tried, the patients fainted, after losing five, four, or even fewer ounces of blood. Abstinence will sometimes produce a train of symptoms exactly similar to those of the disease which it is employed to remove. Persistence in the abstinence will aggravate the malady, which will baffle every mode of treatment as long as the abstinence is persevered in: but which will disappear with surprising rapidity on the administration of a generous diet. This is especially the case with those affections of simple irritation which assume the appearance of inflammation, and which are attended with headache, noise in the ears, giddiness, restlessness, sleeplessness, and delirium.

“A professional man was seized with fever; rigid abstinence was enforced, not only during the continuance of the fever, but also during the stage of convalescence. Delirium, which had been present at the height of fever, recurred in the convalescence. A physician of eminence in maniacal cases was consulted, who recommended him to be removed to a private asylum. Before his advice was carried into effect, another physician saw him; a different treatment and regimen, with a gradual increase of nourishment, were adopted; the patient was well in a few days, and within a fortnight returned to his professional avocations.”

The condition of the stomach, its tolerance, or desire for food, is intimately dependent on the treatment it has been subjected to, that is, whether its functions have been abused. There are many examples of the kind to be found in every medical treatise, and the practice of the consulting physician is rich in proofs of the influence exerted by good or bad treatment of this important organ of the body. The effects, moreover, produced on other organs through it are among the most interesting phenomena exhibited in the history of disease, the intimate relation of the stomach to other parts of the frame being such as to bring about an immediate disturbance of vitality under abnormal conditions. Thus, a man addicted to drunkenness was cast into prison for theft, and reduced at once to a diet of bread and water. After the first week, a disorder of the intellectual faculties took place, his countenance became pale and expressive of languor, his flesh wasted, and his strength declined; his nights were sleepless; shortly afterwards there was delirium, which was mild at first, but subsequently furious. These symptoms might have been easily mistaken for those which denote

inflammation of the brain, but the true nature of the affection was discriminated, and brandy was administered. Immediately the affection of the brain disappeared, and the flesh and strength returned.

The following case from *The Economy of Health*, by James Johnson, M.D., published in 1837 (p. 137 *note*), illustrates also the sympathy to which attention has been drawn :—

“The sister of the celebrated Mrs. Siddons (Mrs. Whitlock) died under the care of the author (James Johnson, M.D.), from *starvation*, without its attendant sufferings of hunger and thirst. An aneurismal enlargement of a vessel in the brain, pressed upon the origins of two particular nerves—the eighth and ninth—those which give power to speech, swallowing, and digestion. The consequence was, an inability to speak, to swallow, and to digest. Fortunately, the paralysis of one of these nerves (the eighth) prevented the sense of hunger, and though this unfortunate lady lived five weeks after the failure of swallowing was complete, she suffered not from either hunger or thirst! During all this time the faculties of the mind and the *other* functions of the body were unaffected. She was 76 years of age.”

In the same connection we may regard the influence of diet as shown in the effects produced by improper food or its irregular supply, many observations having been made on the subject from time to time by medical and scientific writers; the following from a treatise on Diet, by Dr. F. A. Paris, F.R.S., is even now well worthy of attention. The crude physiology of certain of the inferences will be unacceptable in this day, but the philosophy of the passage (pp. 70–71, edition 1826) is still sound :—

“The celebrated Mr. Spalding observed that whenever he used a diet of animal food, or drank spirituous liquors, he consumed in a much shorter time the oxygen of the atmospheric air in his diving-bell; and he, therefore, had learnt from experience to confine himself upon such occasions to vegetable diet. He also found the same effect to arise from the use of fermented liquors: and he accordingly restricted himself to the potation of simple water. The truth of these results is confirmed by the habits of the Indian pearl-divers, who always abstain from every alimentary stimulus previous to their descent into the ocean. Those physicians who have witnessed the ravages of pulmonary disease will readily concur in the justness of these views. The experiments of Dr. Prout would lead us to the conclusion that less carbonic acid is given off from the lungs during the influence of an alcoholic stimulant; but he justly observes that this may arise from its specific action upon the nerves; and, indeed,

it appears probable, that the evolution of carbon from the blood is determined by nervous energy.* The principal changes which the chyle undergoes during its passage through the respiratory organs appear to consist in the most perfect elaboration of some of its principles; for instance, the albumen is converted into fibrin, and the colouring matter acquires its more decided characteristics. But these changes may be in a great measure produced by the action of the pulmonary vessels. It has been estimated that about eleven ounces of carbon and twenty ounces of water are given off by the lungs during the twenty-four hours; but what portion of these products are to be placed to the account of the aliment has not been ascertained. It does not even appear that the useless carbon is always evolved from the blood during its passage through the organs; it may be retained for want of sufficient nervous energy, and thus produce a morbid change upon the body. The quantity of pulmonary transpiration is also influenced by various circumstances, especially the liquid nature of the food, and the quantity of fluids taken into the stomach. I have paid some attention to this circumstance, for it suggests many important links in the treatment of disease. (See *Pharmacologia*, by F. A. Paris, M.D., 9th edition, 1843.) The only safe conclusion at which we can arrive upon this intricate subject, may be embodied in the following canons: viz., 1st—that animal food proves more stimulant to the lungs than vegetable aliment. 2nd—That fermented liquors are injurious to these organs, both on account of their general effects upon the circulation, and their specific action upon the nervous system; increasing on the one hand the necessity of respiratory changes, and on the other diminishing the energies of the organs by which they are accomplished. 3rd—That moderate exercise, hilarity of mind, free ventilation, and abstinence from fermented liquors, are essentially necessary in that stage of the digestive process at which the chyle is poured into the blood-vessels, in order to promote the free evolution of carbonic acid."

The following pithy extract from the *Cyclopædia of Practical Medicine*, edited by John Forbes, M.D., &c., Alexander Tweedie, M.D., and John Conolly, M.D., Vol. 1, though originally published in 1833, is in accord with existing knowledge:—

"A man addicted to drunkenness was cast into prison for theft, and reduced, at once, to a diet of bread and water. After the first week a disorder of the intellectual faculties took place; his countenance became pale and expressive of languor, his

* The experiments of Drs. Prout and Fyfe have clearly shown, that, whatever depresses the nervous energy, diminishes the quantity of carbonic acid expired. The depressing passions, violent and long-continued exercise, low diet, mercurial irritation, and spirituous liquors, uniformly produce this effect. The quantity is also, for the same reason, diminished during sleep.

flesh wasted, and his strength declined; his nights were sleepless; shortly afterwards there was delirium, which was mild at first, and subsequently furious. The prisoner was allowed brandy. The cerebral symptoms disappeared, and the flesh and strength returned. The effects of abstinence and of an amelioration in the diet are so obvious in this brief case that it is full of instruction. Abstinence and excess induce *similar* symptoms and effects; a fact which cannot be too deeply impressed upon the mind of the young practitioner. Good says in his *Study of Medicine**: "The desire for food, or the sense of hunger is very painful for the first three or four days, after which it ceases, and does not return unless stimulated by fresh food. The Chipecwans, or native savages of Canada, according to Mr. Long, give striking proofs of the power of the stomach in both extremes—that of hard eating and that of hard fasting—and, as nearly as may be, at the same time: for when one of these is on the point of commencing a journey, he devours as much as he would otherwise take in a whole week; the daily allowance of animal food alone being, on such occasions, as Captain Franklin tells us, eight pounds;† and, and having gorged the stomach, he starts upon his expedition, and commences a long season of severe abstinence."

In certain constitutions there is a marvellous power of control over the stomach, which can be exerted at will, the details of which scarcely seem credible. For instance, Dr. Erasmus Darwin narrates the story of a person, "who had gained a voluntary command over these inverted motions of the stomach and throat, and supported himself by exhibiting this curiosity to the public. At these exhibitions he swallowed a pint of red rough gooseberries and a pint of white smooth ones, brought them up in small parcels into his mouth, and restored them separately to the spectators, who called for red or white as they pleased till the whole were redelivered."

"All those drugs which, by their bitter or astringent stimulus, increase the action of the stomach, as camomile and white vitriol, if their quantity is increased above a certain dose, become emetics."

The student of mental diseases is in a good position for estimating the effect of fasting on the animal frame. There are few among the patients who pass under his notice that do not, at some time or other, exhibit the features peculiar to this condition, the records of asylum physicians are full of them, and there are to be found in them the accounts of phases and moods that will repay minute investigation. The literature of

* *The Study of Medicine*, by John Mason Good, fourth edition, Vol i. p. 110.

† *Journey to the Shores of the Polar Sea in 1819-22*, p. 250. London, 4to. 1823.

this branch of the subject is too rich for extensive quotation, but the subjoined excerpts are likely to be valuable. Religious monomania, it should be particularly noted, is a frequent cause of the fasting propensity, and perhaps Cornaro's apothegm that "of all the parts of the feast that which one leaves does one most good," commends itself with especial force to this class of insane people.

Mental alienation has a marked influence in prolonging the period during which life can be sustained without food. Dr. McNaughton, of Albany (*American Journal of Medical Science*, vol. vi. p. 543), gives a similar instance, during which a young man lived fifty-four days on water alone. And in a case read in the French Academy (*Archives générales de Médecine*, tome xxvii., p. 130) a suicide lived sixty days on nothing but a few mouthfuls of orgeat syrup, before death put an end to his sufferings.

. . . . When persons are immured by the falling in of a mine, quarry, &c., they seem subdued by the darkness; but in cases of starvation after shipwreck, or in travelling through an uncultivated country, the worst passions are aroused, and suspicion and ferocity add to the torments of hunger. A high temperature seems to aggravate these passions. "It is impossible to imagine," says M. Savigny, in speaking of the wreck of the "Medusa," "to what a degree the circulation is quickened under exposure to the burning sun of the equator. The pain of my head was intolerable; I could scarcely master the impetuosity of my movement; to use a well-known phrase, the blood boiled in my veins; all my companions suffered from the same excitement;" and the terrible scenes of blood and crime which passed upon the raft were doubtless owing largely to this cause. On examination after death the bodies of those dying from starvation are found to be almost bloodless, except the brain, which contains its usual quantity, and completely destitute of fat. The various organs, with the exception of the brain, are all reduced in bulk, and the coats of the intestinal canal especially are rendered thinner. M. Chossat (*Recherches expérimentales sur l'aninition*) deprived a number of animals (birds and small mammals) of all sustenance, and carefully observed the phenomena that followed, and his experiments throw much light upon the subject of starvation. The temperature in all the animals was maintained at nearly the normal standard until the last days of life, when it began rapidly to fall. The animals, previously restless, now became quiet, as if stupefied; they fell over on their sides, unable to stand; the breathing became slower and slower, the pupils dilated, the insensibility grew

more profound, and death took place either quietly or attended with convulsions. If, when these phenomena were fully developed, external warmth was applied, the animals revived, their muscular force returned, they moved or flew about the room, and took greedily the food that was presented to them. If now they were again left to themselves, they speedily perished; but if the external temperature was maintained until the food taken was digested (and from the feeble condition of their digestive organs this often took many hours) they recovered. The immediate cause of death seemed to be cold rather than starvation. The average loss of weight in the animals experimented was 40 per cent., varying considerably in different cases, the variation depending chiefly on the relative amount of fat. Weighing the different tissues separately, and arranging them in two parallel columns, according as they lost more or less than 40 per cent., gave the following results:—

Parts losing more than 40 per cent.

Fat	93·3
Blood	75
Spleen	71·4
Pancreas	64·1
Liver	52
Heart	44·8
Intestines	42·4
Muscles of voluntary motion	42·3

Parts losing less than 40 per cent.

Muscular coat of stomach	39·7
Pharynx and œsophagus	34·2
Skin	33·3
Kidneys	31·9
Respiratory organs	22·2
Bones	16·7
Eyes	10
Nervous system	1·9

In Ferriar's "Theory of Apparitions" a lunatic is declared to have believed that he had swallowed a demon, and had retained him in his stomach. He resisted the calls of nature during several days, lest he should set the foul fiend at liberty. His resolution was overcome, however, by administering an emetic in his food.

Within the last week or two a voluntary victim to an hallucination, the same in kind as the above, succumbed to death after a lengthy trial of water as a preservative of life. This patient, a bookseller, named George Alvesbury, refused all food, saying that "the spirits" were his guardians, and would keep

him alive. A coroner's jury, while expressing their conviction that the unhappy lunatic died from want of food, yet attributed his death to misadventure; but even their verdict cannot remove the assurance that spiritualism is not, alone, sufficient to maintain existence. That the encouragement of delusions, however, is a fruitful source of disease is sufficiently well proved. Indeed, all improper treatment of the person is attended with imminent risk to itself—a risk measured by individual susceptibility in each case. In forced abstinence this is always shown, and attention is drawn to it in the article on "Abstinence," in Ripley and Dana's *American Cyclopædia*, thus:—

"Among the most noteworthy phenomena caused by starvation are the offensive effluvia exhaled from the sufferers, the fetor of their discharges, and the rapidity with which the body passes into a state of putrescence. Such a condition of things is peculiarly favourable to the reception of fever and other contagious diseases, and they acquire in such cases an intensity and virulence rarely seen under other circumstances. Thus, as was seen in Ireland in 1847, pestilence follows in the train of famine. The effects of the prolonged employment of an insufficient diet alone are rarely seen; they are commonly complicated with those of unwholesome air and over-exertion. Of such complication prisons, workhouses, and charitable institutions have afforded abundant examples on a large scale. One of the most noted of these occurred at the Millbank Penitentiary, near London, in 1823." (See page 279.)

"Another well-authenticated epidemic, owing to a similar cause, occurred in the establishment for the destitute children of New York, at what was termed the Long Island Farms, in the winter of 1839–40. The diet of the children consisted of bread of an inferior quality, with molasses, night and morning, and soup made from coarse beef, alternately, with the beef itself at noon; in addition, the dormitories of the children were crowded and ill-ventilated, and they had scarcely any out-door exercise. 'About the middle of December, 1839,' says Dr. Morrell, the attending physician of the Asylum (*New York Journal of Medicine and Surgery*, vol. iii.), 'evidences of a constitutional change in many of the children were apparent; they were dull and inactive, their eyes lacked lustre, and their skins exhaled an offensive odour.' Next, many of them were attacked with slight cholera morbus, and afterwards an incurable diarrhœa set in, attended with gangrene about the cheeks, the anus, or vagina. In most of these cases sloughing of the cornea took place, and the eye was destroyed. When, for a length of time, the allowance of food, either from its indigestibility or from its limited amount, has been insufficient for the wants of the system, the digestive organs are weakened

the appetite is lost, and the person often loathes food while he is suffering from starvation. In the experiments of Chossat, when turtle-doves were placed upon a limited allowance of corn, but with access to water, part of the corn was either rejected by vomiting, accumulated in the crop, or passed unchanged through the bowels."

There is a good deal yet to be learned from the study of the natural starvation to which animals are periodically subjected, and this has been held in view by most of the philosophical naturalists who have paid attention to the subject in the past. The progress we have made is not so much an increase in the actual amount of our information, as by the better understanding of such facts as have come within our cognisance. In the old *Encyclopædia Metropolitana* we find it stated, "Though it is no improbable opinion that the air itself may furnish something for nutrition, it is certain there are substances of all kinds, animal, vegetable, &c., floating in the atmosphere, which must continually be taken in by respiration. And that an animal body may be nourished thereby is evident in the instance of vipers, which, if taken when first brought forth, and kept from everything but air, will yet grow very considerably in a few days. So the eggs of lizards are observed to increase in bulk, after they are produced, though there be nothing to furnish the increment but air alone; in like manner as the eggs or spawn of fishes grow and are nourished with the water."

"Dr. Shaw speaks of a couple of cerastes (a sort of Egyptian serpent), which had been kept five years in a bottle close corked, without any sort of food, unless a small quantity of sand, wherein they coiled themselves up in the bottom of the vessel, may be reckoned as such; yet when he saw them, they had nearly cast their skins, and were as brisk and lively as if just taken. . . .

"Sir G. Ent weighed his tortoise several years successively, at its going to earth in October, and coming out again in March, and found that, of four pounds four ounces, it used only to lose about one ounce."

These facts, of course, speak in favour of the assumption that the process of starvation is a slower one in degree as the starving animal is more lowly organised, and we are from this not unprepared to accept the assertions contained in the *Encyc. Brit.*, 8th ed., art. "Animal Kingdom," that "Of many individuals exposed to an absolute abstinence of many days, the young are always the first to perish. Of this the history of war and shipwreck offers in all ages too many frightful examples. . . . Captain Bligh, of the 'Bounty,' sailed nearly 4,000 miles in an open boat, with occasionally a single small bird, not many ounces in weight, for the daily sustenance of

17 people; and it is even alleged that 14 men and women of the 'Juno,' having suffered shipwreck on the coast of Arracan, lived 23 days without any food. Two people first died of want of food on the fifth day. In the opinion of Rhedi, animals support want much longer than is generally believed. A civet cat lived 10 days without food, an antelope 20, and a very large wild cat also 20; an eagle survived 28 days, a badger one month, and several dogs 36 days. In the 'Memoirs of the Academy of Sciences' there is an account of a bitch, which, having been accidentally shut up alone in a country house, existed for 40 days without any nourishment than the stuff on the wool of a mattress which she had torn to pieces. A crocodile will live two months without food, a scorpion three, a bear six, a chameleon eight, and a viper ten. Vaillant had a spider that lived nearly a year without food, and was so far from being weakened by abstinence that it immediately killed another large spider, equally vigorous but not so hungry, which was put along with it. John Hunter enclosed a toad between two fire-pots, and found it as lively as ever after 14 months. Land tortoises have lived without food for 18 months, and Baker is known to have kept a beetle in a state of total abstinence for three years. Dr. Shaw gives an account of two serpents which lived in a bottle without any food for five years."

The power of dogs to live beyond the thirty days without food is well authenticated by several witnesses in very recent times, the daily papers having, during the present year, contained accounts of animals unintentionally shut up in rooms while their owners have been away from home, and, on being released, found still alive, but frightfully emaciated. Other species of the animal world, too, not usually supposed to be good fasters, share the power of prolonged abstinence. Vol. II. of the *Transactions of the Linnean Society* contains a most interesting account of instances. The following passage will repay perusal:—

"The mere air of the atmosphere appears to afford nourishment enough for many forms of animal life. Snails and chameleons have been often known to live upon nothing else for years. Garman asserts it to be a sufficient food for the greedy spider, and tells us that, though the spider will ravenously devour flies and other prey whenever he can seize it, he will not starve upon the spare regimen of air alone. Latreille confirms this assertion by an experiment of his own. He stuck a spider to a piece of cork and cut him off from all food whatever for four months; at the end of which period he appeared to be as lively as at first. Mr. Baker, in like manner, confined a beetle under a glass for not less than three years, allowing him nothing but air for his diet. At the expiration of this period he was not only

alive, but fortunate enough to effect his escape, and go in pursuit of a more substantial repast. And we are hence prepared to receive, with less hesitation than we should otherwise do, the wonderful tales of frogs, toads, and lizards, and other reptiles found imbedded in trunks of trees or blocks of marble, so deeply seated that, though exhibiting life and activity on exposure to the atmosphere, they must have been blocked up in their respective cavities for fifty, and, in some instances, for a hundred years, cut from every kind of food except the moisture by which perhaps they have been surrounded and from all communication with the atmosphere itself; though, from experiments lately made by Dr. Edwards, it is absolutely necessary that there be an indirect communication of air through the pores or some other opening of the surrounding substance.* Fishes, when rendered torpid by being suddenly frozen, are well known to live in this manner through the winter in the Polar Seas, and to be quickened into activity by the returning warmth of the summer. 'The fish,' says Captain Franklin, describing the winter he passed at Fort Chipewyan, on the skirts of the Polar Sea, 'froze as they were taken out of their nets, and in a short time became a solid mass of ice; and by a blow or two of the hatchet were easily split open, when the intestines might be removed in one lump. If in this completely frozen state they were thawed before the fire, they recovered their animation. This was particularly the case with the carp. We have seen a carp recover so far as to leap about with much vigour after it had been frozen for thirty-six hours.' It may possibly be observed that these examples are drawn, for the most part, from cold-blooded or exsanguineous animals, and that, in such cases, there is no waste of living matter by the skin, the great vehicle of discharge in animals of a higher rank. But they are drawn from animals that, in their common customs and habits, have the same instinctive craving for food, and the same faculty for converting it into their own substance, by the process of digestion, as animals of any superior class; while a like power of enduring long periods of fasting in a state of inactivity, without any injury to the general health, is quite as conspicuous and incontrovertible in many kinds of warm-blooded animals, and especially those that sleep through the winter season. (A combination of circumstances is generally essential to the occurrence, such as a diminution of sensibility and animal heat, a suspension of many of the functions, and especially a stoppage of the secretions and excretions. In this condition, individuals have been known to remain several weeks, and even whole months, without taking any food. Such cases are rare in the

* Quoted in *The Study of Medicine*, by John Mason Good, M.D., &c., 4th edition, vol. i. p. 112.

human race, but certain animals present us with annual examples of them. At the approach of winter, when they are large and fat, they fall into a torpid state, and continue so until the warmth of spring returns . . . A hog, weighing about 160 lbs., was buried in its sty, for 160 days, under a great mass of the chalk of Dover cliff. When dug out, it weighed only 40 lbs. No food or water happened to be in the sty when the portion of the cliff fell. The animal had nibbled the wood of the sty, and eaten some loose chalk, which, from the appearance of the excrement, had passed more than once through the body.)”

VORACITY.

Not long after Dr. Tanner concluded his performance as a faster, another American claimant for universal fame entered on the task of “eating” to excess; the result of the foolish attempt has not been made known, but we are not without scientific evidence that a wonderful consumption of food has ere now been accomplished. The *Philosophical Transactions*, vol. xliii., for 1744, contains the account of a voracious boy, whose capacities might have been subject of envy for even Mr. Pickwick’s aversion—the “fat boy.” The narrative consists of an “extract of a letter from Mr. B—— B——r, containing an account, in pounds and ounces, of the surprising quantities of food devoured by a boy, twelve years old, in six successive days, who laboured under a ravenous appetite, at Black Barnsley, in Yorkshire. Communicated by Dr. Mortimer, Secretary, R.S. (Read April 25, 1745.)

“The boy was regular as other children till about a year ago, when this extraordinary craving of appetite first began, which afflicts him to such a degree that (they tell us) if he was not fed as he calls out for it, he would gnaw the very flesh off his own bones; so that, when awake, he is constantly devouring—it can hardly be said eating, because nothing passes his stomach; all is thrown up again.

THURSDAY.		THURSDAY—continued.	
	lbs. ozs.		lbs. ozs.
Water	6 4	Pudding	1 4
Milk	2 0	Veal	1 0
Rye	3 0	Meat pye	0 8
Sugar	0 4	Beer and water	6 8
Treacle	0 8	Milk	7 1
Bread	1 0	Bread	3 0
Milk	3 0	Milk	3 0
Butter	0 8	Water	3 0
Sugar	0 4	Bread	1 0
Beef	1 0	Milk	2 0
Bread	0 4	Beef	1 4
Milk	6 4	Small beer	4 0
Bread	0 8	Fruit	1 0
Water	6 4		
Milk	3 0		
Apple pye	1 0		
			69 8

FRIDAY.				SUNDAY.			
			lbs. ozs.				lbs. ozs.
Rye			3 0	Rye			3 0
Milk			2 0	Milk			6 0
Sugar			0 4	Sugar			0 8
Bread			2 0	Water			6 8
Milk			4 0	Bread			2 4
Water			2 0	Milk			2 0
Milk			2 0	Water			8 8
Meat pye			1 4	Milk			4 0
Milk			8 0	Rye			2 0
Meat pye			2 0	Milk			2 0
Water			4 0	Broth			4 0
Small beer			2 8	Pudding			1 8
Pudding			0 12	Beer			2 0
Mutton			0 3	Mutton			1 8
Bread			0 12	Water			6 8
Apple pye			4 0	Milk			4 0
Water			2 0	Bread			1 12
Milk			2 0	Rye			3 0
Water			2 0	Milk			2 0
Bread			1 0	Butter			0 8
Butter			0 4	Sugar			0 8
Sugar			0 8	Milk			2 0
Meat pye			1 4	Water			2 0
Water			2 0	Beer			2 0
Milk			2 0	Bread			0 8
Milk			4 0	Milk			2 0
Beer			2 0	Fruit			0 8
Bread			0 10	Mutton			2 0
Fruit			1 0				
Milk			2 0				

77 0

61 14

SATURDAY.			
Milk			8 0
Bread			1 4
Water			2 0
Milk			2 0
Bread			4 8
Milk			2 0
Mutton			1 0
Water			6 8
Milk			2 0
Rye			1 12
Beer			2 0
Pudding			1 4
Veal			0 12
Cheese			0 4
Treacle			0 8
Bread			0 12
Water			0 8
Broth			4 0
Water			2 0
Milk			2 0
Butter			0 8
Sugar			0 4
Beer			4 0
Mutton			1 0
Veal			1 0
Fruit			0 12

58 8

MONDAY.			
Bread			2 12
Milk			8 0
Sugar			4 0
Water			2 0
Bread			2 0
Milk			0 4
Water			0 8
Milk			5 0
Rye			6 0
Milk			1 4
Broth			0 8
Pudding			1 0
Beer			1 0
Mutton			1 4
Water			6 8
Milk			4 0
Bread			0 8
Rye			0 8
Milk			0 12
Butter			2 0
Sugar			4 0
Milk			3 0
Water			4 0

60 12

TUESDAY.		lbs. ozs.		lbs. ozs.
Bread	5	0	Beef	1 0
Milk	8	0	Mutton	1 0
Butter	0	8	Beer	4 0
Water	2	0	Sugar	0 8
Milk	4	0	Fruit	1 0
Hasty Pudding	5	0		
Water	6	8	Tuesday	55 8
Treacle	0	8	Monday	60 12
Meat Pye	1	12	Sunday	77 0
Mutton	1	0	Saturday	58 8
Pudding	1	4	Friday	61 14
Water	6	8	Thursday	69 8
Beer	2	0	Salt, in the 6 days	1 0
Milk	2	0		
Water	2	0	Total	384 2

“A letter from T. Cookson, M.D., to Mr. Latouche, at Little Chelsea, concerning the boy who has an extraordinary bulimia or craving appetite. Communicated to the Royal Society by John Martyn, F.R.S., and Prof. Bot., Cantab.

[Read May 9, 1745.]

“Wakefield, April 24, 1745.

“SIR,—I was desired by your friend Mr. Arnet to transmit to you what I could collect relating to the boy at Barnsley (six miles from Wakefield); so please to accept of the following, which is the enclosed account of his eating and drinking, taken by a friend of mine, for six days successively.

“Matthew Daking, a healthful and sprightly boy, about ten years old, was, about fifteen months ago, seized with a fever, which continued above a fortnight. In the beginning he had frequent provocations to vomit, which induced his apothecary to give a gentle vomit of ipecacuanha. The retchings continuing, he gave him another. They seemed to operate well, but yet did not answer the end in settling his stomach. However, the fever gradually went off, but the vomiting rather increased, notwithstanding some other methods were used. He then began to have a craving appetite, to satisfy which he was indulged in eating and drinking more plentifully, but always vomited most of what he had taken almost immediately. His appetite kept increasing, so that in a few weeks his eating was come to the pitch you now see it in. Thus he continued above a year. His urine and stools do not exceed those in health; so that he vomits most of what he takes in. He has tried crude mercury and all sorts of medicines and mineral waters. At present he looks pretty well in the face, and is cheerful, but has lost the use of his legs and thighs, which are much emaciated. He is sometimes so hungry that he says he could eat them all. He often

wishes we were in the king's kitchen. One pig was fed with what he had vomited, and was sold in the market; but the country people getting hold of the story put a stop to the feeding of any more.

"To account for the disorder I am much at a loss, so shall not trouble you with my conjectures.

"I am, your most obedient servant,

"T. COOKSON.

"By the journal annexed it appears that he ate the following quantities of various sorts of food, both meat and drink, as is specified in the other journal, which I have given at large, pp. 367 and 398.

1745.				lbs.	ozs.
April 4.	The whole quantity amounted to	.	.	65	8
" 5.	" "	.	.	60	14
" 6.	" "	.	.	58	8
" 7.	" "	.	.	76	12
" 8.	" "	.	.	60	8
" 9.	" "	.	.	55	8
Total in Six Days				377	10
Salt				1	10
				379	4

"N.B.—He died a few months after, quite emaciated."

Voracity is commonly occasioned by some abnormal condition, such e.g. as the presence of tape worm (*tenia*):—

"In a case under M. Rostan, in 1819, ice administered inwardly considerably abated for a time the fury of the patient's hunger (*Medical Gazette*, July 1833). Several pieces of tænia were expelled by means of purgatives. As her hunger decreased, her appetite became depraved, so that she would devour the raw lights of slaughtered animals, and browse upon grass." *

In the *Philosophical Transactions*, Dr. Burroughs relates the case of a patient who would devour an ordinary leg of mutton at a meal for several days together, and fed greedily at the same time on sow-thistles and other coarse vegetables. Leaving, however, these somewhat unsavoury subjects, we may with advantage consider the physiological questions to which they give rise. Hunger and thirst are physiological states, and they have a definite relation.

This has been carefully considered by Dr. Good, among others, who thus describes it:†—

* *The Study of Medicine*, by John Mason Good, M.D., F.R.S., &c. Vol. i. p. 107, note by Ed.

† *Ibid.*, 4th edition.

“THIRST AND HUNGER COMPARED.

“Thirst and hunger may be compared to two sisters, united together for the common purpose of rendering the animal attentive to the preservation of its own existence. When their call is obeyed, they are a source of pleasure ; when it is neglected or resisted, they are a cause of great and even fatal suffering. But, in the production of these two very different results, pleasure and pain, thirst is far more energetic and intense than hunger. The quickness with which the taking of drink appeases the first of these sensations, contrasted with the slowness with which solid aliment is necessarily conveyed into the stomach, perhaps, may tend in some measure to explain the really greater enjoyment generally felt in quenching thirst than in satisfying hunger. . . . The differences between hunger and thirst, when long continued, and assuming the character of diseases, or rather between the effects of a total abstinence from solid food, are still more strongly marked. To use a term employed by Brown, the state of *sthenia*, of erethismus, of dryness, and of local and general heat ; the increased activity in the general and capillary circulations ; the energy of the external senses, of the whole nervous system, and of the muscular organs—the results of thirst—form a very manifest contrast to the prostration of every power of the constitution, to the languor of all the functions, and to the true adynamia produced by unappeased hunger. Death, which is the end of both these scenes, takes place much sooner from thirst, and the more so because no remission occurs in the cruel and progressive course of its symptoms. Death from want of solid food always comes on more tardily, and its phenomena, which are characterised by irregular paroxysms, are attended with remissions of greater or less duration. . . . Savages and savage beasts are equally sensible of the benefit of pressure in the case of hunger, and resort to it upon all occasions where they have an opportunity of taking off the pain in the usual way.

“The manis, or pangolin, that swallows its food whole, will swallow stones, coal, or any other substance, if it cannot obtain nutriment ; not that its instinct deceives it, but for the purpose of acquiring such a pressure as may blunt the sense of hunger, which it finds intolerable. Almost all carnivorous beasts pursue the same method, and a mixed mass of pieces of coal, stone, slate, and earth, or other hard materials, is often met with in the stomach of ostriches, cassowaries, and even toads.

“The Kamtschadale obtains the same end by swallowing sawdust, and some of the northern Asiatic tribes by a board

placed on the region of the stomach, and laced behind with cords, drawnt tighter and tighter according to the urgency of the uneasiness. In our own country we often have recourse to a similar expedient, and only exchange the tightened stomach-board for a tightened handkerchief. It is possible, therefore, temporarily to overcome these natural sensations without the natural means; and the passions of the mind have as strong an influence on both as any of the substitutes just adverted to. Thus both are completely lost beneath the sudden communication of news that overwhelms us with grief or disappointment. So Van Helmont* tells us that, happening to dislocate his ankle while walking, with a good appetite to dine with a friend, his appetite immediately forsook him, but returned as soon as the joint was replaced, though the pain continued for some time with little alteration. There are some passions, however, as those of rage and eager desire, which, while they repel the sense of hunger, increase that of thirst. But they prove equally the close connection of both feelings with the state of the nervous system generally, and the strong and extensive influence which is sympathetically exercised over them.

“Morbid Thirst, as a genus, is new to the science of Nosology, and hence the two species, which belong to it, have hitherto, in almost every instance, been separated from each other, and thrown loosely into remote parts of the classification. Dr. Young, however, offers an exception to this remark; for, with his accustomed accuracy, he has united them under a common head. The genus being new, it has hence been necessary to create a new name for it, and that of *dipsosis* (from *δυσω*, ‘to thirst’) has appeared not only most pertinent, but most consonant with the nomenclature in common use, which has naturalised various terms derived from the same root—as *adipsia*, *polydipsia*—this last being a synonym of *hydrophobia*. The two species of the genus are the following: 1. *Dipsosis avers*; 2. *Dipsosis expers*. Immoderate Thirst and Thirstlessness

“I have at this time,” says Dr. John Mason Good,† “a young lady of about thirteen years of age, in other respects in good health, who is tormented with a thirst so perpetual, that no kind or quantity of beverage seems to quench it for more than a few minutes. Emetics and purgatives have been tried in vain. Squills and other nauseating expectorants seem to promise more success. It has now lasted for several weeks.

* Helmont believed that the seat of the soul was in the stomach, for, he argued, from the moment we receive bad news, we lose our appetite. If we are famishing we have only bad dreams, because the stomach participates in the want which attends it. It could not, he maintained, possibly reside in the brain, because that organ does not contain blood.

† *The Study of Medicine*, vol. i. pp. 100, 101.

The most grateful palliatives are the vegetable acids, and especially acescent fruits, and a decoction of sorrel-leaves (*rumex acetosa*, Linn.), slightly inspissated with gum-arabic or some other mucilage, and sweetened to meet the palate. Liquorice, which, among the Greeks, had so high a reputation for quenching thirst as to be honoured with the name of *αδυσρον*, 'the thirst extinguisher,' has little or no effect. And it is probably true, as suggested by Dr. Cullen, that it only acts in this manner when the root is well chewed, by which means the salivary excretories become stimulated to an increased secretion of fluid. In a foreign miscellany we have reported to us a case of the same kind, brought on by drinking a cold beverage during the paroxysm of a fever, that continued for more than a twelve-month.* And in another foreign journal we have an account of this disease as epidemic among children.† The quantity drunk is sometimes enormous. Four hundred pints of wine and water have, in some cases, been swallowed daily. . . . The agony of violent thirst brought on by bodily suffering is well depicted in the memorable Black Hole of Calcutta.‡

Cases of *thirstlessness* (*dipsosis exarsens*) are not by any means frequent. W. Bouffard records one instance, in which a young lady, 22 years of age, passed whole months without drink, yet appeared to be well in every other respect.§ Facts of the same kind are reported by Sir G. Bankes; || and Sauvages mentions two instances that occurred to himself. In the one, the patient, a learned and excellent member of the Academy of Toulouse, never thirsted, and passed months at a time without drinking even in the hottest part of the summer; in the other, the patient, who was a female, of a warm and irascible temperament, abstained from drinking for forty days, not having the smallest degree of thirst through the whole of this period.¶ Neergaard, as quoted by Blumenbach (*Physiol.* sec. xxi., 322. T. W. Neergaard, *Vergleichende Anatomie und Physiologie der Verdauungswerkzeuge*, &c.), has furnished us with other examples; and M. Fournier informs us that one of his most intimate friends reached, not long since, the age of 48, without ever having drunk of any fluid, or been thirsty; but he was accustomed to eat voraciously. It is singular that he should have died of *dropsy* of the chest, apparently the result of a second bleeding for some accidental malady.—*Diet. des Sciences Médicales*, art. "Cas Rares."

* *Huermann, Bernerkungen*, i. p. 28. † *Gazette de Sante*, 1777, p. 93.

‡ *Annual Register*, 1758.

§ *Diet. des Sciences Med.*, tom. li. p. 405. || *Med. Trans.*, vol. ii. p. 265, &c.

¶ *Nosol. Method*, vol. iv. p. 770, 4th edit.

This paper would hardly be complete without a reference to the exhibition provided by Dr. Tanner, an American physician, who, in the present year, entered on a fast of forty days' duration. The task was declared to have been accomplished, but to the impartial critic it was attended with a series of circumstances little calculated to favour a belief in its *bona fides*. The fasting doctor was subject to no scientific examination while undergoing the self-imposed test, which can be deemed satisfactory, and the secrecy exhibited in many of the details in connection with the affair served to awaken a doubt of the integrity of the chief actors in it. Moreover, late accounts reveal that it was entered on in a purely commercial spirit, the "doctor" having benefited pecuniarily to the extent of £25,000. Such elements detract from the scientific value of the experiment, and reduce it at once to the common level of a Barnum's show; so that for any advantage to be derived from it towards physiological research became an absolute impossibility. The "fast" is said to have been accomplished, the only material taken throughout having been water and mineral waters. The record kept indicated a series of variations in bodily weight, which, had they been trustworthy, would have served to interest the physician very considerably; the instant return of an excessive appetite, however, at the conclusion of the fast, and the wonderful tolerance shown by Dr. Tanner's stomach for large quantities of solid food, when, by all ordinary experience, it could scarcely be supposed capable of receiving the smallest amounts of even the lightest nutriment, lend perplexing appearances to the whole business. That a forty days' fast, or even a longer, is possible, can be readily supposed, but that Dr. Tanner has proved the fact is open to grave suspicion.

"The Fasting Doctor" has been followed by many imitators; one, an Italian student, who undertook to live fifteen days without food, recently succumbed at the end of eight; in other cases death has proved the impossibility of the task except to such as are physically constituted to resist privation for a lengthened period. The nervous temperament has been shown to have an important bearing on the subject, and, in all future experiments, this must be taken into first account. That there is much to be *learned* from the phenomena of starvation is undoubtedly true, but the method of inquiry that will yield tangible results is the simple, unsensational, and certain investigation characteristic of veritable research. Quackery and pretension are the enemies of science.

ART. IX.—DR. BUCKNILL AND PRIVATE ASYLUMS.

DR. BUCKNILL'S plentiful disquisitions on the subject of private asylums for the insane have recently been supplemented by a volume* containing the fulminations contributed by him on the same subject to the pages of the *British Medical Journal* in the form of a series of sensational articles. The style and contents of these articles make it highly probable that they will commend themselves to that mysterious being, "the Englishman of average intelligence:" they are eminently adapted to appeal to the mind that accepts obfuscation for illumination; and especially do they deserve commendation for the remarkable skill they display in presenting actual facts in that imaginative manner that is so well calculated to mislead the unreasoning and uninformed members of the reading public. It is impossible, of course, to assume that Dr. Bucknill is ignorant of the arrangements common to private lunatic asylums, but his remarks must cause some amusement to those who are familiar with the subject on which he writes. The average intellect is, unfortunately, little prone to examine assertions laid before it with the air of authority, and cannot fail to be impressed with the statements of a writer who ventures to address a popular audience on a subject of vital importance, of which, however, he only shows the side to which his own sympathies are inclined. In the "Care of the Insane" this is just the fault of which our author has been guilty; he has, moreover, seen fit to pursue a method of demonstration calculated to inflame the senses of his readers, without at the same time affording any accounts on which a correct judgment concerning the data to be considered is alone possible. He is an excellent partisan, but with the zealous vehemence of every defender of a crotchet, he resolves lustily to combat the evils his own indefatigable fancy has enabled him to create. For a long series of years, as Chancery Visitor in Lunacy, Dr. Bucknill enjoyed the fullest opportunities of witnessing the progress of improvement in the institutions into which, in his official capacity, he always possessed a right of entry. It is, therefore, a strange persistence in error that can admit of his being still in a position of such absolute darkness, as his last book proves he must be, regarding the merits of the institutions on which he showers such wholesale condemnation. The work itself, when submitted to careful examination, is at once seen to be a reflex of long pent up desire to reconstitute

* *On the Care of the Insane, and their Legal Control*, by J. C. Bucknill, M.D., F.R.S. London, 1880. Macmillan & Co.

a system in which its author professes to feel no confidence, and which desire he even admits to be the ruling motive of his attack.

It is as well, therefore, to analyse in brief detail the charges he brings against private asylums, in substantiation of his demand for their universal suppression in their present form, and the establishment of State institutions for the treatment of insane persons. It should be carefully noted that Dr. Bucknill makes an accommodating reservation to the effect that *medical men* may, even after the realisation of his ideal arrangements, continue to have charge of one, two, or at most three, private patients. This extraordinary suggestion—extraordinary, when the prime cause of offence against licensed proprietors is the unfounded supposition that they may, under the influence of the *auri sacra fames*, be induced to unduly detain their inmates—is the most illogical and inconsiderate that could have been made, as it is open to the same objection persistently urged against the present system.

A priori the inducement to keep one or two high-paying patients is infinitely greater than the temptation to detain even a larger number where the average profit derivable from each is less. Dr. Bucknill, in fact, in his devotion to a single idea has unconsciously strayed into numberless bye-paths, not only of error, but of inconsistency also. There is, however, no ground for the language he employs in respect of the improper detention of lunatics in private asylums. Dr. Bucknill cannot be ignorant that the owner of a licensed institution is as powerless as Dr. Bucknill himself now is, to withhold a patient's liberty for one single day. His concealment of facts that would influence the judgment of the reader whose information is gathered from his pages alone, cannot, we think, be justified on any grounds. The Commissioners in Lunacy, the Visiting Justices of the Peace, the Local Guardians, are likely at any time to inspect unannounced, and without intimation, every institution where a lunatic is under confinement; what chance then is there for a licensee to hoodwink all or any of those authorities in respect of his charges, especially since the latter are all freely in communication with the inspectors for the whole period of their visit? We do not care to deal with Dr. Bucknill's insinuations against the *bona fides* of proprietors; but it may be said of them that they are at best but an ungrateful reflection on the discrimination of the authorities to whom the aspersed class owe their appointment to the positions they hold.

The question of acts of violence inflicted on patients is dealt with in a way that leaves it doubtful whether our author is under the impression that bruised bodies and broken limbs are the usual concomitants of treatment in private asylums, his

confusion of the terms "private house" and asylum being well calculated to leave an unfavourable impression in the mind of the uninformed reader. Proceeding from this, he gives his opinion, that the home treatment of lunatics is often likely to be fraught with benefit to them, but with the strange tendency to forgetfulness of his premisses we have before alluded to, he insists on "medical treatment" as a distinctive feature in the cure of every case.

The superior efficiency of public asylums on which Dr. Bucknill has so long insisted with all the energetic utterance of an enthusiast, is a figment of his excited imagination, rather than a probable, or even possible, truth. The associations of a Government institution are rarely, even under the most prepossessing appearances of more than a prison cheerfulness; and how the benignant influences that largely enter into the conception of Dr. Bucknill's lunatics' paradise, are to be resolved out of the concomitants of the routine existence of a state prisoner controlled by uninterested, salaried officials, it is not possible to understand. Officialism in any form is fatal to mental quietude; the constant presence of the signs and symbols indicative of incarceration, are the most to be regretted of all the hindrances to recovery in the county asylums of to-day; and every visitor to a private retreat at once appreciates the kindly influence of the homely surroundings amid which the patients pass a contented, and often even happy period of their existence. By sweeping away the personal interest of a superintendent in those under his care, and merging it in that which is demanded simply as an official duty, we shall lose a prominent, and, as the Commissioners readily admit, fruitful means of ameliorating the painful state in which patients are committed to seclusion. Dr. Bucknill's estimate of the matter he reviews, however, takes no cognisance of these important details. Private asylums are to him private enterprises, and nothing more; and as such he seeks for their abolition; because they do not accord with his ideas, firstly and chiefly, and secondly and lastly, because he charges them with being the scenes of irregularities and improprieties, no single one of which, that is important, does he succeed in exposing. Sensationally headed leading articles will not lead the public astray; and Dr. Bucknill would have been wiser to base his statements on something more stable than innuendo and imagination. We object to his attempt, not on its own account simply; it has a *raison d'être*, appreciable to all acquainted with the history and present aspect of lunacy in this country; but we do emphatically complain that one who is recognised as some authority in the matter, should thus unfoundedly asperse a beneficent system to the English public.

ART. X.—THE BRITISH ASSOCIATION PICNIC AT SWANSEA.

By J. M. WINN, M.D., M.R.C.P., &c.

THE following was part of the programme for the last meeting of the British Association for the Advancement of Science, as mentioned in the *Times*:—"The more eager will journey to the magnificent haven of Milford, where lie just now the *Great Eastern* and a small fleet of war ships; others will cross the Bristol Channel to Ilfracombe, and rouse the sea-birds on Lundy Island, or, satisfied with a shorter sea trip, make for the Mumbles, with its light-house and ships' telegraph, its weedy rocks and tide-races, &c." This is all very enjoyable and commendable for those who have wealth and leisure at command, but it has nothing to do with the advancement of science, and what will it avail the impecunious votary, consuming the midnight oil in a lonely garret? The Association at its outset was expected by its enthusiastic supporters to lead to scientific discoveries, but it has failed in its object, and has lapsed into little more than a gigantic pic-nic, enlivened occasionally by sensational addresses on Materialistic Philosophy. All great discoveries have been made by single individuals, and not by associations or companies. Judging from many of the addresses delivered during the last five years, it might be not inaptly termed an association for the advancement of infidelity. The public have been amused and mystified with crude hypotheses about the omnipotence of atomic force, evolution, bathybries, primitive man, and the mental and intellectual faculties of the ant, which, from Sir John Lubbock's reasoning, it might be inferred, is the original primitive Christian. The study of Natural History is a pleasing pastime for those who have leisure and taste for it, but it has been unduly exalted as one of the noblest pursuits of man, as if the study of butterflies and cow-slips was to take rank with that of the human mind.

The last meeting, at Swansea, is generally admitted to have been a failure. Professor Ramsay attempted to revive the uniformitarian theory of Lyell, which ignores a superintending providence. Dawkins's address was a reiteration of old arguments respecting primitive man. Spurrel's paper inferred the existence of primitive man, from flint flakes only, a notion which Mr. Whitley long since scattered to the winds. The

most laughable event of the evening was the announcement that Professor Schaafenhausen had arrived from Bonn, bringing with him the famous Neander skull. This, of course, drew immensely. Respecting this precious relic, Lyell, in his *Antiquity of Man*, said it was "in regard to capacity by no means contemptible." Its capacity is twice as capacious as that of a gorilla; and Professor Rolleston said it belonged to a man, and not to the missing link.

After the expenditure of grants from the Association to the amount of more than £2,000 for the exploration of Kent's cavern, it does not appear that Mr. Pengelly has yet discovered any traces of primitive man, and this useless pursuit is abandoned by the Association. Why does not Mr. Pengelly study the character and habits of the living Devon savages, near Lapord? It might prove more profitable than hunting for the imaginary extinct wild Orson of Kent's cavern. Mr. Pengelly's search reminds us of the philosopher of Laputa, who spent his life in the endeavour to extract sunbeams from cucumbers.

Mr. Galton's address on Mental imagery threw no light on the nature of this mysterious phenomenon. In the fifth volume of the *Journal of Psychological Medicine** we drew attention to the fact, that on geniuses especially is bestowed the faculty of most vividly seeing, as if in a picture, the scenes which they describe.

* Vide *Charles Lever*, part ii. vol. v., new series.

ART. XI.—EPIDEMICAL CONTAGION IN SPIRITUALISM.

HAVING just re-read the brochure by Dr. Forbes Winslow on "Spiritualistic Madness," I cannot refrain from mentioning an instance where I quite believe that a distinct epidemical spiritualistic contagion was present in a room as decided as any miasma at times recognised by sensitive people as the cause of any given fever.

I was calling on a friend in Paris, whom I did not know to be a spiritualist. Several spiritualists were present at her afternoon reception; she herself and her brother were both tracing in me a strong resemblance to a dead relative, and hoping and believing I might prove a powerful medium.

All this was quite unknown to me, but I have often related, as a curious psychological experience, which I have never before attempted to explain, how intense was the physical discomfort I went through. I could not describe it, but only compare it to some extent with the physical misery I always endure when in the same room or even in the same house with a *corpse*. "Spirits" played on a concertina! "Spirit drawings" were exhibited, &c., but all that *after* I had been so strongly impressed by that intangible "something" in the air.

To give any real force to this personal corroboration of Dr. Forbes Winslow's theory on the epidemical contagion of spiritualistic madness, I ought to add that an unusually keen sense of smell enables me to detect odours which might well be regarded as altogether inappreciable. In London, during an epidemic of small-pox, I have recognised, the moment of entering within the radius of infection, a feeling of a dense atmospheric fog-wall, with small-pox odour. In Paris I have easily avoided it during a severe epidemic, by keeping in the middle of the road when there were infected houses on both sides of the street. Again, in the spring of this year, when suffering from an extremely severe attack of scarlet-fever, the smell of drain-poison (which, I believe, had chiefly caused the illness) was always present, until convalescence had fairly set in, and the poison was apparently entirely eliminated from the system.

I have a little daughter who inherits this acute sense of smell, but with her it is more subtle and highly discriminating. At two months old she almost sprang out of her nurse's arms in

her determined efforts to smell a hyacinth. At twenty months old she smelt when there was milk in the room from a cow which had lately calved, and refused that which she had long been taking from an inferior cow, saying, "You may have that, but I want that other."

Nor is this highly-developed sense of smell connected with any lesser powers of sight or memory.

She will now point out at an immense distance a pheasant under cover or a hare. Her sight has been carefully trained from earliest infancy to counteract any possible hereditary tendencies to near-sightedness, but the acute sense of smell is altogether intuitive.

I need hardly say I have never felt tempted to have anything more to do with spiritualists or spiritualism.

WYMA.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

The Brain the Organ of the Mind. By H. CHARLTON BASTIAN, M.A., M.D., F.R.S., &c. Vol. 29 of *The International Scientific Series*. London: C. Kegan Paul & Co, 1 Paternoster Square. 1880.

IN the absence of any prefatory remarks, we are at a loss to understand the motives which could have induced Dr. Bastian to write, and Messrs. C. Kegan Paul & Co. to publish, a work so full, not only of fanciful but mischievous hypotheses. If Dr. Bastian had any new and positive facts to enumerate respecting "the new phrenology," all well and good; but, as this is not the case, why should he be so desirous to animalise and materialise the human mind, and to spread, for the enlightenment of the laity, doctrines about which the leading cerebral physiologists are not agreed?

Dr. Ferrier anticipated Dr. Bastian in an article in *The Princeton Review* for July 1879, entitled *The Organ of Mind*. Both title and arguments are substantially the same as Dr. Bastian's; they both assert that the intellectual and moral faculties can be located in the brain, whilst the facts which they adduce are insufficient even to determine the seats of motion and sensation. Is it, then, fair to the public that crude and dangerous theories, calculated to destroy all social happiness, should be blazed abroad as truth?

In his first chapter, Dr. Bastian attempts to explain the origin of the nervous system. After divesting his language of technicalities, his arguments make us acquainted with nothing more than we knew before—that the nervous system had an origin. As to its origin, we know no more than we do of any other of the mysteries of creation. The non-recognition of a First Cause inevitably leads to a hopeless entanglement of ideas.

In his chapter on the scope of mind he gives utterance to his materialistic proclivities as follows:—"It is customary to speak of *the mind* as though it were a something having an actual independent existence—an *entity*, that is, of a *spiritual* or uncorporeal nature. Consequently we find spread abroad in all directions definitions of mind, and descriptions of the powers of mind, which, to say the least, carry with them implications of a decidedly misleading character." What, then, are we to

say of those who hold the opposite opinion, and who would reduce the human mind to a *non-ent*ity, and who would have us believe that our thoughts are evolved by some inexplicable cerebral mechanism? When Dr. Bastian can show us, by means of a microscopical cerebroscope, the ideas as they "burst into birth" from the cells of the brain, we will believe him.

The author, in common with other physiological psychologists, believes in unconscious cerebration, that extraordinary function of the brain, discovered by Dr. Carpenter, by which the higher faculties of the mind can be exercised independently of the mind itself.

In his attempt to explain the nature of reason, imagination, and volition, on physiological principles, Dr. Bastian gets into a complete fog. He says:—"We may, perhaps, safely conclude that, while many instinctive actions are more or less immediate products or resultants, consequent upon the undeviating regularity in the recurrence of visceral states and impressions, and of the sense-guided movements which they evoke; reason, imagination, and volition, on the other hand, as mere higher developments arising out of previous processes, have their seed time in all that is unfamiliar among the chance sensorial impressions which animals, whose experience is growing and whose nervous systems are developing, are accustomed at intervals to receive from the outer world."

Dr. Bastian does not derive much support for his theory by a comparison of the brains of different individuals. Whilst men of great intellect have been found to have had large brains, the heaviest on record was that of a native of Sussex, who had been a poacher. He could read and write, and had a good memory; but was not conspicuous for mental ability. We are, however, told that the potentialities were there; but this is begging the question.

With regard to man's moral faculties, he makes no original observations, but contents himself by quoting, as if it were gospel truth, the following pedantic and obscure remarks of the late G. H. Lewes, on whom he seems to have pinned his faith:—"Man's individual functions arise in relation to the Cosmos: his general functions arise in relation to the social medium; thence moral life emerges. All the animal impulses become blended with human emotions. In the process of evolution, starting from the merely animal appetite of sexuality, we arrive at the purest and most far-reaching tenderness; from the merely animal property of sensibility, we arrive at the noblest heights of speculation. The social instincts, which are the analogies of the individual instincts, tend more and more to make sociality dominate animality, and thus subordinate per-

sonality to humanity. . . . Thus, the human intellect emerges from animal intelligence, and develops a vast independent creation, having the whole Cosmos and humanity for its material. Concurrently with this, the moral intelligence develops its system. Both intellect and conscience are products of the animal impulses and social impulses, acting and reacting. While the intellect is mainly occupied with the relations of the Cosmos and its history, having the ultimate aim of making these subservient to practical needs, the conscience, or moral intelligence, is mainly occupied with the relations of humanity—human needs and human actions—having the ultimate aim of conforming our conduct to those relations, harmonising our impulses with the impulses of others, thus aiding others and gratifying ourselves.” This debasing view of human nature needs no comment.

Dr. Bastian suggests the question *whether, in the event of localisation being a reality*, the several mental faculties “are dependent upon separate areas of brain-substance, or whether the localisation is one characterised by mere distinctness of cells and fibres.” This, by Dr. Bastian’s admission, settles the fundamental question at issue. Phrenology, neither the old nor the new, has yet discovered the seats of the intellectual faculties.

In our critical remarks of Dr. Bastian’s psychological views, we have no desire to detract from his reputation as a pathological anatomist. We cannot, however, refrain from expressing our regret that his position as a professor of medicine gives weight to materialistic and misleading notions relative to mental science, a study which does not lie within the scope of his speciality.

J. M. WINN.

On Slight Ailments; their Nature and Treatment. By LIONEL S. BEALE, M.B., F.R.S., &c. London: J. & A. Churchill. Philadelphia: Presley, Blackiston.

THESE valuable lectures by Dr. Beale have supplied a great want in medical literature. The sum of human happiness is chiefly made up of small things, and small ailments go far to destroy the comfort of life; anyone, therefore, who can lessen these, does the public a service, and it is gratifying to find one of the most scientific physicians of the day giving us the results of his experience as to the treatment of many of the innumerable ills that flesh is heir to.

The author introduces the subject to his class with the following sound remarks:—

“It therefore follows, and this will be strongly impressed upon you when you come to work carefully at the important subject of diagnosis, the detection of disease, that many of the apparently slight disturbances or ailments may be due to some grave pathological change, which would be entirely passed over by one who had had little experience in medical observation, but would be full of significance to the well-informed practitioner, and that apparently serious illness may be due to temporary and functional derangement only. Do not, therefore, be too hasty in giving an opinion concerning the import of uncertain and indefinite symptoms. We should remember that the most perfect machines sometimes go wrong without a flaw being detected just before the occurrence, it may be, of a complete breakdown. The tissues and organs, and the marvellously minute and delicate structures of a living organism may fail in a hundred ways without giving any notice to its owner, while the most careful scrutiny and minute examination may fail to demonstrate any fault or flaw; nay, even after the body has ceased to work, after its death, the changes resulting in its destruction may elude the most careful scrutiny.”

“Medical advisers of purely anatomical and pathological habits of mind are apt to offend unscientific patients, and, without deserving it, gain for themselves the unenviable reputation of being thoughtless and unkind—regardless of others’ suffering, and if not objectionable, very far from agreeable ministers of relief. People do strongly object to follow the advice of such advisers, however correct it may be; and perhaps the least unfriendly among the patients of such a doctor would, in confidence and in the most quiet manner, recommend him as soon as possible to change his vocation.”

“It has been my lot to study, on more than one occasion, the well-turned phrases and persuasive sentences by which popular prescribers of decillionths of grains, brimful of tact, managed to bring conviction to the minds of people of intelligence, and at the same time to impress them with their profound knowledge and intelligence, though all the time they were writing nonsense, and probably knew that they were doing so. But, as is well known, cleverly-stated nonsense often hits the mark, and will continue to do so for many a long year. Men high among the most intelligent and most learned—nay, men who have been looked up to as men of the world, have often been humbugged in matters medical, and even profound lawyers have failed to distinguish medical nonsense from medical sense, and mere sham from real scientific knowledge. Those who are

always gauging the value of evidence, and devoting themselves to the extraction of truth, seem specially susceptible to medical and scientific imposition. But there is hardly a department of human endeavour in these days in which you will not find audacious humbugs influencing opinion, and gaining for a time notoriety and renown at the hands of their dupes. I know persons who would be easily influenced by what the quack says, who would go away from the honest, well-informed medical practitioner, with the idea that he knew nothing whatever about his business, and was quite ignorant of the nature of the changes taking place in the organism, and of the method by which these changes might be modified when they were not properly performed. This is unfortunate, but there is no help for it. Every upright practitioner has been placed in this most unhappy position more than once in his life. Should you find yourselves so situated, the best thing is to say very little, and be as patient as possible, leaving matters to be set right by time. But, while doing our utmost to preserve and extend the high repute always enjoyed by medical practitioners, we must be careful not to play into the hands of pretenders, and this we shall certainly do if we needlessly offend fanciful and crotchety patients. By so doing we practically dismiss them to be preyed upon by quacks."

It is not to the general practitioner only that this work will be found useful ; the psychologist, too, will meet with much to arrest his attention, especially what the author says on the subjects of hypochondriasis, hysteria, vertigo, wakefulness, and drowsiness, &c. The following extracts will show the author's manner of dealing with some of these important symptoms:—

"In this way," by constipation, "that unpleasant condition known as hypochondriasis in the male, and as a form of hysteria in the female, very often commences. There is even the possibility that a condition of disease, bordering upon insanity, may be brought about by long-continued improper action of the bowels. Patients will often come to you complaining of very great discomfort. They tell you they feel more or less oppressed, and heavy and overwhelmed ; some complain of an unpleasant sensation all over the surface of the abdomen : and when they have taken food, instead of gradually disappearing, it seems as if it went on accumulating and distending the stomach ; the patient is blown up with wind : and many persons who suffer in this way soon lose their healthy complexion and become more or less sallow and pasty. Indeed, it is quite extraordinary how many different derangements of the health may result from imperfect action or a torpid state of the secreting and expelling structures of the large bowel. Imperfect action of the descending

colon may cause violent and persistent nerve pains, referred to the back or hip or groin. Certain forms of sciatica are due to this cause; violent lumbar pain is also not unfrequently caused by sluggish action of this part of the alimentary canal."

"Vertigo, swimming in the head, or giddiness, is an indication sometimes of disturbed action of the stomach and liver, and sometimes of deranged circulation and disturbed heart's action. But this symptom may be also due to affections of the nerve structure of the brain or the small arteries which supply it. The exact seat of the lesion varies, but in animals injury to the crus cerebri, as well as certain injuries to the cerebellum are followed by vertigo. For one case, however, which is due to serious disease of the brain or its vessels, we shall meet with a large number which depend upon temporary derangement of the digestive organs."

"Drowsiness.—Patients sometimes come to consult us in consequence of a persistent sleepy state. They will tell you that they could sleep all day as well as all night. If they sit on a chair for a few minutes they drop off to sleep; if they take up a book or a paper, it soon falls from their hands in consequence of drowsiness coming on; even if they go out for a walk they soon begin to experience an almost irresistible tendency to lie down and yield themselves to sleep. Patients who suffer in this way sometimes come for help to their medical adviser. They may feel pretty well in health, with the exception of this irrepressible drowsy feeling, and they ask you what they can do to get rid of a tendency so very troublesome and disagreeable.

"In many cases this state seems to depend upon some imperfect action of the digestive organs. Sometimes it may be traced to over-feeding. Sometimes to taking too large a meal in the middle of the day. Sometimes beer is the cause of it, or a too liberal allowance of wine. If you give mild purgatives, and mineral acids and saline medicines which act upon the intestinal canal, you will often get rid of the condition, and cure the patient. When the liver is at fault, as is not infrequently the case, you will find the advantage of giving a small dose of calomel, blue pill, or gray powder every third or fourth night, for three or four courses.

"Cold bathing, also, is often useful. As soon as the patient rises in the morning he should have a cold shower bath. There is no need of a large quantity of water. A shower bath of two or three pints will be sufficient. If the drowsiness is very troublesome, two moderate shower baths a day should be tried—one at about eleven, the other at four o'clock—cold or tepid, according to the time of the year. In some cases, in addition

to the cold bathing, a mild purgative every night for a week will be found useful."

"Wakefulness and Restlessness.—The very opposite condition to drowsiness afflicts some patients. They come to you complaining that they cannot sit still or rest quietly for a time. They experience a strong desire to be continually walking about. They cannot stay for long in one place, and do not feel satisfied unless they get constant change of scene. You inquire if there is any cause for this restlessness, but, as a rule, the invalid assures you that everything is going on in its usual way. But he cannot feel satisfied, quiescent, or composed. Some suffer from vague frights. When they go to bed at night, instead of dropping off to sleep in a natural way, they lie tossing about. The pillow is not comfortable, and soon gets too warm for the head. A most uncomfortable night is passed, and the patient only gets a little sleep towards morning, and wakes up from this, feeling tired, exhausted, and unrefreshed. The mental disturbance in these cases depends upon some temporary derangement which cannot be accurately defined. If upon inquiry you learn that the restless state has existed for any considerable time, you must tell the patient to thoroughly change his mode of life. If he is in business, you must recommend him to get away for a time. Send him to some place where he will get complete change of scene for a month or more. The diet should at the same time be carefully regulated, and in all probability the patient will return home well, and able to go on with his round of daily duty just as steadily as before the occurrence of the illness."

The work is not only a guide for the management of slight ailments; it teems throughout with original physiological and pathological observations, which greatly enhance its value, and prove the profoundness of the microscopical researches of the author. It is impossible for us within the limits of a review to do more than indicate a few of the valuable medical aphorisms with which these lectures abound.

Experimental Researches on the Regional Temperature of the Head under conditions of Rest, Intellectual Activity, and Emotion. By J. S. LOMBARD, M.D., formerly Assistant Professor of Physiology in Harvard University, U.S. London: H. K. Lewis. (Pp. 211.)

THIS is an essay of great interest and value. The experiments seem to establish an important doctrine in cerebral physiology;

namely, that the evolution of heat is in proportion to the intensity of mental action. The author hoped to be able to localise the various mental functions by comparing the rise of temperature in different parts of the head, from the various forms of mental excitement. The result in this respect, however, is very limited. The anterior portion of the left side of the head showed the rise more frequently, and to a greater extent, than any other region, both for intellectual and for emotional states.

It is not easy in a few words to explain the mode of experimentation. Suffice it to say that the instrument used was a thermo-electric apparatus. The examination was restricted to a few heads, so that all peculiarities and disturbing influences might the more readily be detected and allowed for. The utmost care was always taken to make the experiments trustworthy and exact; and, as the results show, the tissues intervening between the brain and the instrument do not offer so much difficulty as might be imagined.

The Physiology of Mind ; being the first part of a third edition, revised, enlarged, and in great part rewritten, of the " Physiology and Pathology of Mind."

The Pathology of Mind ; being the third edition of the second part of the " Physiology and Pathology of Mind," recast, enlarged, and rewritten.

DR. MAUDSLEY'S work on the " Physiology and Pathology of Mind " has now reached a third edition. The first volume of this edition, which appeared in 1876, deals with the Physiology of Mind ; the second part, published last year, deals with the Pathology of it.

The new edition in its entirety being now before us, it may not be amiss to glance at the scope and purport of the work.

It is written with the intention of harmonising physiology and psychology. An inauspicious divorce has, in Dr. Maudsley's opinion, hitherto existed between these two sciences. The consequence has been sterility, or, worse than sterility, an unhalloed and ill-begotten fruitfulness. Dr. Maudsley, the herald of a new era in mental science, appears, and forthwith the barren shall be made to conceive.

Let us examine the charge against psychologists, and then Dr. Maudsley's claim to be the founder of a sacred union between the divorced sciences.

The charge against psychologists is that they have confined themselves to their own consciousnesses for their observation of mental phenomena, and that they have neglected to study the insane and idiots, the lower races of man, and the lower animals, as well as the experimental investigation of the nervous system. In considering this accusation we will first consider what weight is to be attached to it if true; and secondly whether it really is true.

That it is useless or misleading to examine our own consciousness is upheld by an argument borrowed from Comte. To observe we must pause; while if we do pause there is nothing left to observe. This argument unluckily proves too much. It proves that from self-examination we cannot draw any trustworthy conclusions; while as a matter of fact Dr. Maudsley wishes not to discard, but to dethrone, this method of acquiring knowledge about mental states. But must we pause to discover the co-existence and the succession of the phenomena of consciousness? Can we not remember them? Can we not even to some extent observe them in passing, without disturbing the current of thought or of feeling? How else have been obtained any of the acute analyses of intellect and of emotion that are to be found in all psychological writers, from Aristotle's days to our own?

The laws, too, that govern the relations of these mental states to each other have been obtained by the same method. In fact, the psychology of Dr. Maudsley's book is a psychology borrowed from the men he charges with raw and windy disquisitions. We do not wish in the smallest degree to detract from the value of Dr. Maudsley's work. On the contrary, we consider it to be a valuable and praiseworthy attempt to give a higher generality to the derivative laws of mind, and to discover the hidden portions in the chain of events of which thought, emotion, and volition are the last links. The attempt is a valuable one, because of the abundant collection, the lucid exposition, and the scientific grouping of facts, and the ingenuity wherewith inferences are extracted from them. It is a praiseworthy one because it presses towards the generalisation whereby the facts of mind shall be connected with the facts of body. But still it is only an attempt, inasmuch as, apart from those generalisations that had been already made, there is little that deserves a higher title than is conferred by the term hypothesis. There is certainly no such material advance over philosophers in the succession from Hartley to Bain and Spencer, as to warrant such animadversion as is bestowed on all previous writers. Bain and Spencer are, indeed, to some extent excluded from the general condemnation, because they have viewed

mental phenomena by the light of physiology. But Mr. Bain owes very little to physiology for any of his great work. The essential parts of it might have been written almost as well if physiology were no farther advanced than it was a thousand years ago. And, Dr. Maudsley's book notwithstanding, we have no doubt that most competent persons consider that mental science is even now more advanced on its psychological than it is on its physiological side.

But is the charge against psychologists true? Have they really neglected to study the insane, and the lower races of men and animals? On examining this question we must remember one or two circumstances. The early psychologists, as a rule, had no opportunity of investigation by means of the insane and of the lower animals. In former days the country was not studded with asylums, and vivisection was not freely practised. Ethnological observations, in so far as they had been made, were taken into consideration by all philosophers of the *à posteriori* schools. Psychology had little, indeed, to learn from the physiology of one or two hundred years ago; and certainly cannot, with justice, be charged with neglecting that little. In fact, we have only to recall the names of Hartley and Priestley in England, and Condilliac and Cabanis on the Continent, to show that any light from physiology would have been seized with eagerness. It would be much juster to charge physiologists with neglecting the paths of investigation pointed out by speculative philosophers than to charge psychologists with neglecting any department of knowledge that could elucidate their science. Not until Sir C. Bell's time was there any but the most meagre acquaintance with the functions of the nervous system; and Sir C. Bell's time was at least a century and a half after the publication of the *Novum Organum*. Since the labours of this distinguished physiologist—as before them—psychologists have always been found who assimilated whatever truth physiology had to tell them, and thus have always placed their science on a level with the most advanced observations of the day.

According to Dr. Maudsley, however, psychologists were by their *method* precluded from studying psychology from a physiological point of view. This, truly, is a strange statement, considering that from the time of Bacon there has always been a school of philosophers who investigated mental phenomena or, at least, some departments of mental phenomena, according to inductive principles. From Hobbes and Locke to Bain and Spencer, the method has been the same. Philosophers of the school now known under the name of the Association Psychology have never contented themselves with simply torturing their

own consciousness. But it would be interesting to know in what way the physiology of two hundred years ago could have profited psychology if the method of psychology did not debar its use, as Dr. Maudsley asserts. Dr. Maudsley does not, however, make an assertion; he gives a conspicuous example—an example, moreover, not of two hundred years ago, but even of our own day. The example is Mr. J. S. Mill! Mr. Mill did, indeed, condemn M. Comte's attempt to discard psychology, or to convert it into a branch of physiology; justly believing that, at least for a long time to come, the laws of psychology cannot be deduced from physiology. But, in order to show that Mr. Mill's method was in no wise adverse to regarding psychology from a physiological standpoint let us quote his words. "The relations, indeed, of that science (Science of Mind) to the science of physiology must never be overlooked or undervalued. It must by no means be forgotten that the laws of mind may be derivative laws resulting from laws of animal life, and that their truth, therefore, may ultimately depend on physical conditions; and the influence of physiological states or physiological changes in altering or counteracting the mental successions is one of the most important departments of psychological study. But, on the other hand, to reject the resources of psychological analysis, and construct the theory of the mind solely on such data as physiology at present affords, seems to me as great an error in principle, and an even more serious one in practice. Imperfect as is the science of mind, I do not scruple to affirm that it is in a considerably more advanced state than the portion of physiology which corresponds to it; and to discard the former for the latter appears to me an infringement of the true canons of inductive philosophy, which must produce, and which does produce, erroneous conclusions in some very important departments of the science of human nature." (*Logic*, vol. ii. p. 439.) It is thus seen that Mr. Mill confined himself to protesting against the attempt to discard psychology. So far was he from being debarred from physiology by his method, that it was really part of his method to have recourse to it, as could be shown by many passages besides the one just quoted. It is true that Mr. Mill himself did not investigate the physical relations of mind. His special department of inquiry lay in the subjective aspects of thought. He does not treat even of all the subjective aspects of mind; but, with one or two exceptions, of intellectual states only. With as much justice might it be said that his method forbids him to investigate the emotions and the will, as that it debarred him from investigating mental phenomena from a physiological stand-point. He attended specially to the inquiries that he con-

sidered most important, and that he deemed himself most fitted to examine. What more can be demanded of any man?

Dr. Maudsley, however, thinks that no man has any business with metaphysics, that it is a barren study—in fact, he likens it to an attack of measles; the ambitious youth undergoes it, and haply gets immunity from it for the rest of his life. This can hardly be termed a modest criticism on by far the majority of the greatest intellects the world has ever seen. But perhaps it is just; the greatest intellects may go wrong. What has metaphysics done? What is its value? Can it show reason why it should exist? In answer we may say that to those who value only the “bread and butter” sciences, metaphysics can never seem to be of importance. But to those that value truth for its own sake; to those that wish to know the nature, the extent, and the validity of human knowledge, metaphysics will not merely never lose its charm, but it will never cease to be the foundation of all other sciences. Dr. Maudsley does not, perhaps, always mean the same thing when he uses the term metaphysics. If he does always ascribe the same meaning to it, he certainly has not made that meaning clear. He speaks of the “received system of psychology,” the “accepted system of psychology.” At very few epochs in the history of philosophy would such phrases have been correct, and never would they have been more erroneous than now. Dean Mansel protested against grouping all mediæval philosophers under one name, and calling them “The Schoolmen.” But to speak of the “accepted system of psychology” is a still more heedless attempt to characterise by a common term the most heterogeneous opinions. The expression is, in fact, about as significant as such a phrase as the “accepted view of things in general.” Touching the real meaning of the word, what people generally mean when they use it, let us quote Dugald Stewart:—“*Metaphysics* was a word formerly appropriated to the ontology and pneumatology of the schools, but now understood as equally applicable to all those inquiries which have for their object to trace the various branches of human knowledge to their first principles in the constitution of the human mind.” (*Dissert.*, part ii. p. 475.) Elsewhere he speaks of it as the “inductive philosophy of the human mind.” Mr. Bain is still more explicit:—“By ‘metaphysical study’ or ‘metaphysics’ I mean—what seems intended by the designation in its current employment at present—the circle of the mental or subjective sciences. The central department of the field is **PSYCHOLOGY**, and the adjunct to psychology is **LOGIC**, which has its foundations partly in psychology, but still more in the sciences altogether, whose procedure it gathers up and formulates. The

outlying and dependent branches are—the narrow metaphysics or ontology, ethics, sociology, together with art or æsthetics. There are other applied sciences of the department, as education and philology. The branches most usually looked upon as cognate or allied studies of the subjective department of human knowledge are psychology, logic, ontology, ethics.” (“Metaphysical Study,” *Contemporary Review*, April, 1877.)

We suspect, however, that Dr. Mandsley did not use the word according to its current meaning; but applied it rather with special reference to the narrow metaphysics or ontology; though nowhere does he make this clear. But should even this narrow metaphysics be banished from the sphere of human speculation? Those who wish to know for themselves how far, and with what result, human reason can investigate some of the most recondite problems that have ever engaged the mind of man, must examine the subject for themselves. They will not be satisfied to accept without question the dogmatic utterance of even the greatest philosopher. It is not needful that everyone should be a metaphysician any more than it is needful that everyone should be an astronomer or an accomplished mathematician. But surely it is desirable that intellects having an aptitude for metaphysical inquiry should let the light of their genius illuminate the subject. Does the present age not owe any debt to metaphysicians of former days, that we should forget them, or be unmindful of their teaching? To enumerate the debts would be to a large extent to trace the history of philosophy for the last two hundred and fifty years. To name only one thing, Descartes’s rule that nothing should be accepted without proof, has been one of the most fruitful principles of modern times, and it is now one of the most striking characteristics of modern thought. It is, moreover, especially from metaphysicians, from those engaged in the subjective sciences, that such principles come. The proof lies in the history of the sciences themselves.

In the chapter on Mind and the Nervous System the doctrine that mind is an abstraction, that it is not merely an abstraction, but that it is nothing more than a function of matter, is vigorously asserted. We freely grant that it is an abstraction. But so also is matter in the sense in which it is ordinarily understood as a noumenon. With matter as with mind we know only the phenomenal. Possibly there may not be any noumena or things-in-themselves underlying the phenomena or things-as-they-appear-to-us; and some have gone so far as to assert this universal negative, a negative which by the nature of things can never be proved. Assuredly it is not easy to perceive by what process of valid reasoning noumena can be dogmatically established for the one series of phenomena and dogmati-

cally rejected for the other. The question is one of probabilities ; and though personally concurring in Dr. Maudsley's opinion, we regard the question as an open one, and think it will so continue till the end of time. That Dr. Maudsley should have laid so much stress on the doctrine that mind is a function and nothing more than a function of matter, is the more to be regretted, inasmuch as it was wholly needless for his purpose. That every mental change is accompanied, or perhaps preceded by a physical change, though not yet actually proved, is highly probable ; and would most likely be granted by all. Such an hypothesis (for how probable so ever it may be, it is still, according to strict principles of induction, only an hypothesis,) would have served the purposes of Dr. Maudsley's exposition equally well ; while it would have this advantage, it would not carry dogmatic inference beyond the strict warranty of facts, an advantage of no mean importance in a scientific treatise. We may add also that it would not be so likely to bar the way to the reception of the generally sound doctrines of these volumes by stirring up the opposition of some of those who act according to Tennyson's principle :—

Hold thou the good : define it well :
For fear divine Philosophy
Should push beyond her mark, and be
Procureess to the Lords of Hell :—

instead of clinging to that purer faith and higher principle that truth and truth only should be our guiding star in attempting to penetrate the mysteries of nature. We believe, however, that Dr. Maudsley would not value much the too delicate sensibilities of these people. Nay, he oftentimes goes out of his way to animadvert on religion.

Apart from the blemishes we have pointed out, the work is, on its theoretical side, one of great and unquestionable merit. Both volumes are replete with interest ; and suggestive remarks are to be found on almost every page. The style, too, is lucid, in fact, classical.

Archives de Neurologie, Revue trimestrielle des Maladies Nerveuses et Mentales. Publiée sous la direction de J. M. CHARCOT. Paris : Bureaux du *Progrès Médical*.

THIS, the first number of a new journal under the able direction of M. J. M. Charcot, on neurology, bids fair to take its place amongst the highest publications, of the same class, in Europe and America. M. Charcot, in his introductory chapter,

makes the following observations on the objects and character of the work :—

“Pendant longtemps, ces travaux sont restés disséminés dans les grands recueils où trouvent accès les productions médicales relatives aux sujets de tout ordre.

“Un jour, on a pensé qu’il était logique et qu’il serait profitable de les réunir dans des recueils spéciaux. Là seulement, en effet, il était possible de les mettre convenablement en valeur par leur rapprochement même, de les grouper, de les catégoriser d’après leurs affinités naturelles ; là seulement, il était permis de tenir en contact permanent, la Psychiâtrie, depuis longtemps spécialisée, et la Neuropathologie proprement dite, ces deux parties d’une même unité séparées par des nécessités pratiques, mais devant, philosophiquement, rester associées l’une à l’autre par des liens indissolubles.

“A l’étranger, plusieurs recueils de ce genre se sont produits depuis quelques années. En France nous ne possédons encore aucun organe qui réponde exactement au but que nous venons de signaler, et c’est justement dans l’intention et avec l’espoir de combler cette lacune qu’ont été fondées les *Archives de Neurologie*.”

The articles are of an essentially scientific and practical character, and free from those visionary materialistic speculations which have detracted from the value of similar works in this country.

First Annual Report of the State Board of Health, Survey, and Charity, of Massachusetts, January 1880.

THE Board, of which this is the first report, has been in existence only since July 1879. The Act creating it abolished the previously existing Boards of Health and Charity, and gave to the present one powers its predecessors never had. It is also charged with the administration of the lunacy laws. The mode of placing a patient in an asylum is much the same as with us, save that the person who signs the “order for commitment” is a State official, and that only one certificate of insanity is required ; but it must be signed by two physicians. We note that in the Report it is stated that private asylums are not regarded with disfavour.

The Board having been organised only a few months has not yet had time to give that full investigation and mature consideration to this department of its duties which is likely to characterise its future reports.

Report of the London, Ontario, Asylum.

The London Asylum is a large institution, gauged by English standards, containing as it does over seven hundred patients. During the year ending September 30, 1879, 80 men and 88 women were admitted as new patients, making the aggregate population 875. Of this number, 48 men and 40 women were discharged, 40 deaths took place, and 2 escaped. Of the admissions, 79 were transfers from gaols, and 89 from private families under medical certificates; while of the discharged patients 64 are reported cured, 16 improved, and 8 not improved. The ratio of recoveries, 7·31 per cent. of the entire population, shows an improvement on that of the year preceding, viz., 5·75. The probation system, which is a favourite one in America, provided 60 patients, of whom 31 were finally cured, 9 improved, 15 returned to the asylum, and 5 remained on probation at the end of the year. The death-rate exhibits improvement, having fallen from 5·38 to 4·91. The greatest care seems to be constantly taken, judging from the inspector's report, and that of the medical officer, to secure the health and comfort of the patients, by adding to and altering the buildings for their accommodation. These, as described in the report, seem admirably adapted for the purposes to which they are put, and we can judge somewhat of their efficiency from the knowledge afforded that the cost of construction of the cottages which are employed in part of the institution amounts to about £60 per head. In connection with the cottage system of treatment, it is said there have been "no elopements from any of the cottages, and no accident of any kind as the result of too much freedom."

The medical officer makes a demand, in his report, for a pathological laboratory, and this, it can hardly be doubted now, should be part of the arrangement of every considerable asylum. The intimate dependence of psychology on pathological anatomy and histology, makes it a matter of supreme importance to possess the best information and the most extensive, on the intimate structure of the diseased organs under the physician's care.

Some valuable and well-considered remarks are made, when speaking of visitors, in reference to the popular errors regarding asylums, but Dr. Bucke expresses as his opinion, that the antagonism to these institutions is yielding to a better appreciation of their benefits. Dr. Bucke's words are so much to the point with respect to the public feeling in this country, it will be well to give them verbatim:—

"If the doors of the asylums are kept closed, people will

always think that there is something to hide; and it is just this impression which it is so important to remove. There are many other reasons why the public should be encouraged to visit lunatic asylums, such as the constant inspection so maintained by the public; the variety which is in this way introduced into the horribly monotonous life of the patients; the constant assurance thus given to the public that there is nothing to conceal in the manner in which the patients are used. But the reason first mentioned is the most cogent, though there are many others of great force, all tending in the same direction. The reasons given against admitting visitors are: first, that the public curiosity in regard to the care and treatment of lunatics is a contemptible weakness which ought not to be gratified; secondly, that the patients do not like to be visited; and, thirdly, that it does harm to the patients to have strangers pass through the halls where they are and look at them. While I give the gentlemen who urge these objections credit for perfect candour, and a desire equal to my own to render good service to the public and to the patients in their charge, and while I declare that I have weighed this matter carefully and impartially in my own mind, I must acknowledge that these objections seem to me trivial and without force. The first of them I think I have already answered. In regard to the second and third, I have only to say that I have never yet known a single patient object to the admission of strangers into the halls, and that I have never known a patient to be injured by these visits."

The Nova Scotia Hospital for the Insane. Annual Report.

In this institution, to which 74 new patients were admitted in 1879, the death-rate for the year, on a total population of 436, has been only 3·5 per cent., and the number of discharges nearly equalled the number of admissions—72 compared to 74. The outdoor employment of patients is largely resorted to, but the report indicates the trouble experienced in permitting any great number of patients to enjoy open-air exercise without a complicated system of guards. This should scarcely be a matter of difficulty, if properly carried out; it might even be found advantageous to permit a more extensive freedom than seems at present to be enjoyed at this establishment. It rarely happens that privileges accorded to the more rational of the insane are abused, and a general acceptance of the English system of open-door treatment, adopted in the best

private asylums, might be more universally observed. We can well imagine that, as the report before us observes, "Picking oakum, or any monotonous labour, is a variety that does not appeal strongly to the intellect," and we fully appreciate the desire of the superintendent, Dr. Reid, for a larger variety of indoor occupation for his patients—occupations of a healthful and cheerful nature.

It is satisfactory to note the assiduous manner in which improvements are carried out, judging from the report forwarded to us, in transatlantic asylums for the insane. A hint might well be taken in this respect by the public institutions in this country from the Americans. In all respects the institution under notice seems to have followed the path of progress.

Western Pennsylvania Hospital for the Insane. Annual Report for 1879.

During the year 858 patients have been under treatment at Dixmont, of whom 69 have been discharged cured, 85 as improved, 39 as unimproved, and 56 have died, leaving under treatment at the close of the official year 609 persons—a number exceeding that at the same period of 1878 by ten. The condition of the patients is favourably reported on, and the extensive improvements described as completed or in progress in the arrangements of the building prove the care with which the well-being of the inmates of the asylum is looked after. A particular point is made of the amusements afforded to the patients, and a curious table is printed in the report showing the aggregate number who witnessed the various entertainments provided, and otherwise joined in recreative acts, such as walking (54,408), calisthenics (1,830), dramatic entertainments (262), &c. Under the head of "acknowledgments" a large number of persons are thanked for their contributions of books, papers, &c., for the delectation of the patients. This is an interesting feature, and deserves to be frequently imitated. The report also contains a table showing the cost per head of maintenance in 49 hospitals during 1878, compiled from the various reports. From this there is gathered the information that the average yearly expense of keeping an insane patient in an American asylum is about thirty-six pounds sterling. This report contains a number of carefully constructed tables relating to the patients under treatment during the year, such as are not common in the American reports as a rule. One of these reveals that, of

foreign countries, Ireland supplies a larger contingent of lunatics to the hospital than any other, Germany coming next. Two tables headed "how committed," and "how supported," are interesting. From the first we find that "friends" are responsible for the seclusion of 1,701 out of 3,911 patients received since 1856, and from the record "friends or self" are chargeable with the support of 1,709 in the same time, the "city or county" paying for 2,197. Table 16 deals with the form of insanity of those admitted, mania and melancholia being the chief contributories; and under "causes" we find "excesses" the chief agent in producing the insane condition. Many other tables are included in the pamphlet, which altogether deserves great praise for its comprehensive and excellent character.

Willard Asylum for the Insane. Eleventh Annual Report.

The Willard Asylum, at Seneca Lake, N.Y., is the largest institution of its kind in America. It accommodates over fifteen hundred patients, and in 1879 there were, of a total of 1,548, 93 patients discharged. The asylum buildings are very extensive, and are arranged in a way to secure the largest possible amount of freedom to the inmates. During the year with which the report deals considerable alterations and additions have been effected, and the whole of the details in connection with the institution are apparently of the best character possible. The desirability of having a laboratory for the scientific study of insanity by means of physiological and pathological observations, conducted with appliances requisite to accurate research, is a suggestion which has been made in this report also. We trust it will commend itself to the authorities whose consent to the expenditure involved in carrying out the idea must be obtained. The tables contained in this report, though less full and complete than they might be made, yet exhibit much useful information, but the explanatory text is throughout full of practical hints and highly useful information, which will be suggestively important to the working alienist.

The 109th Annual Report of the New York State Hospital and Bloomingdale Asylum.

The old-established hospital and asylum of the State of New York continues to exercise a large and beneficent influence

over the lunatic population of the State. Its connection with insanity is not entire, the hospital affording an asylum to those afflicted by injury or accident also. The Bloomingdale Asylum does not receive cases of simple opium habit or of delirium tremens. During the year 1879 twenty-nine recoveries took place in the institution, and five deaths occurred, the total number of patients under treatment in the twelve months being 265. Of the cases reported as recovered, the form of disease in fifteen was ordinary mania, hysterical mania in three, puerperal mania in two women, and melancholia in nine. The duration of treatment in recovered cases varied from nineteen days to three years six months and seventeen days, the average being about six and a half months. The report speaks favourably of the progress and condition of the inmates of the Asylum for the year, and is in all respects an admirable account of the asylum of which it treats.

INDEX MEDICUS.

We heartily welcome the recent numbers of this work, which realises our anticipation of its value, as recorded in the Fifth Vol. of the New Series of the *Journal of Psychological Medicine*.

ELECTRISATION OF THE MEMBRANES OF THE BRAIN.

THE following interesting account of the beneficial effect of electrifying the brain was published in the *Gazette Hebdom.*, October 3, 1829:—

“Of the Effects of Cephalic Electrification upon the Vessels of the Dura-Mater and of the Pia-Mater.—By Dr. CH. LETOURNIAN.

“We have, then, undertaken to determine directly, what is the effect upon the vessels of the envelopes of the brain, of a moderate electrification, practised with the continued current through the integuments and the cranial wall, nearly in the ordinary medical conditions. For this it was sufficient to make bare, in a mammifer, a portion more or less extensive of the cerebral membranes.’ Doctor Laborde assisted him in the experiment, and in a kitten a month old, in which the cranial wall was still very thin, and was quite easy to cut, a considerable portion of cranium has been cut out on the left side. The dura-mater being so exposed, it was very easy to see with the naked eye, and still better with a magnifying glass, the arterial and venous branches which ramify upon the surface. We proceeded then to the electrification, making use of the small portable pile for continuous current of MM. Onimus and Brown. This pile contains eighteen elements, and we took care, by the aid of a galvanometer introduced into the circuit, to assure ourselves that the passage of the current was effected regularly. During all the duration of the experiment, the positive pole was placed behind the right ascending ramus of the inferior maxilla, and the negative pole upon the anterior cranial region above the eyes.

“Ten or fifteen seconds after the closing of the circuit, the fine arterial branchings of the dura-mater became less and less visible, and, a little later, the venous branches themselves became pale. At each interruption of the current the anemia increased for an instant, then the vessels resumed, little by little, a little larger calibre.

“The experiment, repeated a number of times, gave always the same results, determined successively by Doctors Duval, Laborde, Condereau, and ourselves. The dura-mater of the

right side having been denuded in its turn, the experiment was repeated, which on this side again gave the same results. We pursued the experiment, cutting out on the left side a portion of the dura-mater. The pia-mater being thus exposed, and its vascular branches, arterial and venous, being very visible upon the gray ground of the cerebral substance, the same observations were made upon it. There, also, we could obtain at will, contraction of the vessels.

“The experiments, which we have just related, added to facts cited in the commencement of this paper, put it beyond doubt that it is possible, even easy, to produce in man a temporary anemia of the brain, by means of suitable electrification; but the therapeutical bearing of this fact should not escape the physician. For this temporary anemia can, without the least inconvenience, be renewed a great number of times daily, if one wishes; and our personal experience permits us to affirm that, with a little persistence, one may triumph so over various congestive states of the brain, manifesting themselves either by the simple depression of the intellectual faculties or by psychical disorders of varied nature.

“In support of the preceding, we shall cite the following fact, chosen among many others, and which appears to us typical. It concerns a case of cerebral congestion, or, rather, of a chronic congestive state of the brain, which has yielded to electrification repeated persistently.

“The patient, the Abbé C., aged 55 years, is a corpulent, full-blooded person, with a highly-coloured countenance. When he applied to us he was in despair, because he suffered several times a week from persistent vertigo, during the duration of which he could not take a step without support, and from which he was relieved only by absolute repose. M. C. belonged to a religious community whose principal object is teaching, but he was obliged to renounce, little by little, all work. It had come to pass, he said, that he could scarcely recite his breviary and say mass. After various treatment, there was made to him, at the end of five months, an application of fifteen leeches, with so little effect that the next day he had a severe cerebral congestion, with loss of consciousness and instantaneous fall. This serious accident occurred several times afterwards, and was ordinarily accompanied by violent vomiting.

“To modify this inveterate organic state and restore a proper tonic contraction to vessels habitually dilated, a treatment of long duration was necessary. During five months we electrified the patient three times a week, placing the positive pole of a pile with continuous current at the level of the first cervical vertebra, the negative pole at the level of the superior ganglion

of one of the cervical sympathetic nerves. The number of elements employed varied from fifteen to twenty, and we took care to interrupt the current every fifteen seconds; for experience shows that vascular contraction is produced especially at the opening and closing of the current.

“Each *séance* affected an immediate amelioration, and longer and longer. Soon the patient was able to resume his occupation, and to work, at first one hour, then two hours, then four and five hours per day. At the same time the attacks of vertigo became more and more rare and brief. At the end of five months, the patient ceased a treatment which was no longer necessary; and for several months the alleviation has continued.

“This fact is so eloquent that it appears to us useless to accompany it with comments, and it will surely suggest to practising physicians, therapeutic applications numerous and various.”

The following *jeu d'esprit* appeared originally in an American paper. It forms a good accompaniment to the *Catechism of Advanced Views*, published in the second volume of the new series of the *Journal of Psychological Medicine*:—

"I believe in the chaotic Nebula, self-existent Evolver of Heaven and earth, and in the differentiation of its original homogeneous Mass, its first-begotten Product, which was self-formed into separate worlds; divided into land and water; self-organised into plants and animals; reproduced in like species; further developed into higher orders; and finally refined, rationalised, and perfected in Man. He descended from the Monkey, ascended to the Philosopher, and sitteth down in the rites and customs of Civilisation, under the laws of a developing Sociology. From thence he shall come again, by the disintegration of the culminated Heterogeneousness, back to the original Homogeneousness of Chaos. I believe in the wholly impersonal Absolute, the wholly un-Catholic Church, the disunion of the Saints, the survival of the Fittest, the Persistence of Force, the Dispersion of the Body, and in Death Everlasting."

DARWINISM AT THE INSTITUTE OF FRANCE.—At a recent meeting of the Academie des Sciences M. le Baron Larrey read an analysis of Dr. Bateman's (of Norwich) book on "Darwinism Tested by Language," the communication being received by that learned body with marked attention and much interest. Baron Larrey pointed out that Dr. Bateman had transferred the subject of evolution to the domain of psychology. He was convinced that hitherto naturalists had concentrated their attention too exclusively on the analogies between the body of man and that of animals, or, in other words, on the purely physical, anatomical, and material characters of man, neglecting the study of the intellectual and metaphysical attributes which establish an essential difference between man and the brute. Dr. Bateman's researches, which have been so warmly eulogised by a portion of the English press, and as severely criticised by the Darwinians, seem to have met with a most favourable reception amongst men of science in Paris. We understand that a French translation of the entire work will shortly appear.

INTERNATIONAL MEDICAL CONGRESS, 1881.

" 13 HARLEY STREET, W.,
 " July 14.

"DEAR SIR,—I have much pleasure in enclosing, with a short report of the proceedings of the Committee, a list of the Sections and Officers appointed, as also the Museum and Reception Committees. The question of the best time for the meeting has been most carefully considered, and the most generally convenient time selected. Invitations to attend the Congress and to subscribe to its funds will be shortly issued to all legally qualified medical practitioners in the United Kingdom. Invitations to attend the meeting will be sent to the different countries of Europe, to America, the Colonies, and India. Papers may be read or discussions held in English, in French, or in German, and the Volume of Transactions, subsequently to be published, will contain the various communications in the language in which they were delivered or read.

"It is not yet settled, but there is reason to expect that the very highest patronage may be extended to this national undertaking, which it is to be hoped will form an epoch in the medical history of our country.

"Believe me, dear Sir,

"faithfully yours,

"WILLIAM MACCORMAC,

"Hon. Secretary General.

"To the Editor of the

"*Journal of Psychological Medicine and Mental Pathology.*"

INTERNATIONAL MEDICAL CONGRESS, 1881.

THE Executive Committee made their report to the General Committee of this Congress, which met at the College of Physicians on Tuesday afternoon. The Officers of the Congress were proposed and nominated. The Sections were agreed upon, and the Treasurer, Mr. Bowman, announced that large subscriptions had already been received. It was agreed that the time of meeting of the Congress should be from the 3rd to the 9th of August 1881; the President of the Council of the British Medical Association stated that the Council of that body had postponed their meeting to the following week. It was also announced that the Congress would meet in rooms granted for the purpose by the University of London, the Royal Society and the other learned societies meeting in Burlington House, so that the Sections will be all practically under the same roof.

APPOINTMENTS.

- Atkinson, R., F.R.C.S., Junior Assistant Medical Officer to the Worcester County and City Asylum.
- Benham, F. L., M.B., Resident Clinical Officer to the West Riding Asylum, Wakefield.
- Calcott, J. T., M.B., Deputy Medical Superintendent of the Durham County Asylum.
- Dunlop, J., M.B., C.M., Assistant Medical Officer to the Woodilee Asylum, Lenzie, near Glasgow.
- Frew, W. S., Junior Assistant Medical Officer, Warwick County Asylum.
- Fullerton, R., M.B., Assistant Medical Officer to the City and County Lunatic Asylum, Stapleton, Bristol.
- Geoghegan, E. G., M.D., Assistant Medical Officer to Portsmouth Borough Asylum.
- Hacon, W. E., Resident Medical Superintendent to the Christchurch Lunatic Asylum, Canterbury, New Zealand.
- Hardy, J. G., L.R.C.P., Junior Assistant Medical Officer to the Durham County Asylum.
- Johnstone, J. C., M.B., C.M., Assistant Physician to the Royal Edinburgh Asylum, Morningside.
- MacBryan, H. C., L.R.C.P.Ed., L.R.C.S.Ed., Third Assistant Medical Officer to the South Yorkshire Asylum, Wadsley, near Sheffield.
- Mitchell, R. B., M.B., C.M., Assistant Physician to the Fife and Kinross District Asylum.
- Rutherford, R. L., L.K.Q.C.P.I., Senior Assistant Medical Officer to the Durham County Asylum.
- Shapley, F., M.R.C.S., Assistant Medical Officer to the Wonford House Hospital for the Insane, Exeter.
- Strahan, S. A. K., M.D., Assistant Medical Officer to the East Riding Asylum, Beverley, Yorkshire.
- Thomas, E. G., M.B., C.M., Second Assistant Medical Officer to the Gloucester County Asylum.
- Dr. Bateman, of Norwich, the author of a work on Aphasia, and also of a treatise on "Darwinism Tested by Language," has been elected a Corresponding Member of the Psychological Society of St. Petersburg.

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